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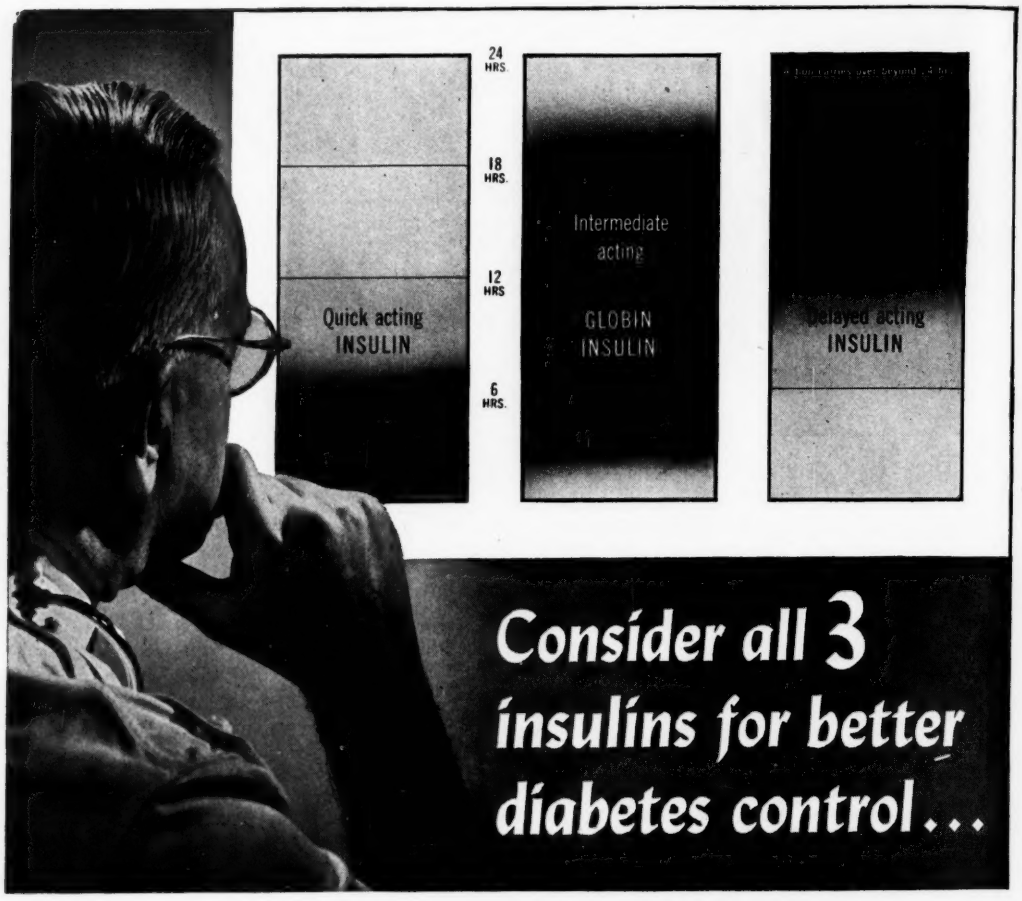


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The RHODE ISLAND MEDICAL JOURNAL

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# ADVANTAGES AND DISADVANTAGES OF THE BARBITURATES IN OBSTETRICS*

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THE barbiturates, usually in combination with scopolamine, are probably used more often than any other drugs for the relief of pain in labor. So employed their action is synergistic and results in total or partial loss of memory. As administered during labor they are not anesthetics; the patient reacts to her pains but, if the method is successful, she has little or no memory of her labor. No general anesthetic exists which will render a patient completely insensitive throughout a labor of even moderate duration; even continuous caudal anesthesia depends upon the repeated reeurrence of pain for the addition of repeated doses. The barbiturates present certain advantages and disadvantages to the mother and infant.

### *Advantages*

1. Maternal. The barbiturates used with scopolamine produce a high percentage of complete or almost complete amnesia in labor; about 85 per cent of the patients receiving this type of medication will have no recollection or only a slight recollection of their labors. When we compared the barbiturates with demerol — the new synthetic drug resembling in its structural formula and properties both morphine and atropine—we found at the Boston Lying-in Hospital that the combination of demerol and scopolamine resulted in only 70 per cent of complete or almost complete amnesia, a disadvantage of 15 per cent.

2. Fetal. That the routine use in our clinic of the barbiturates with scopolamine has actually been accompanied by a lower stillbirth and neonatal death rate is shown in Figure 1. We attribute the obvious drop in fetal mortality to a more conservative policy in the conduct of labor. Knowing that the patient will remember little or nothing of her sufferings we have avoided early operative interference, which in the past was often resorted to because of the suffering and importunities of a conscious parturient.

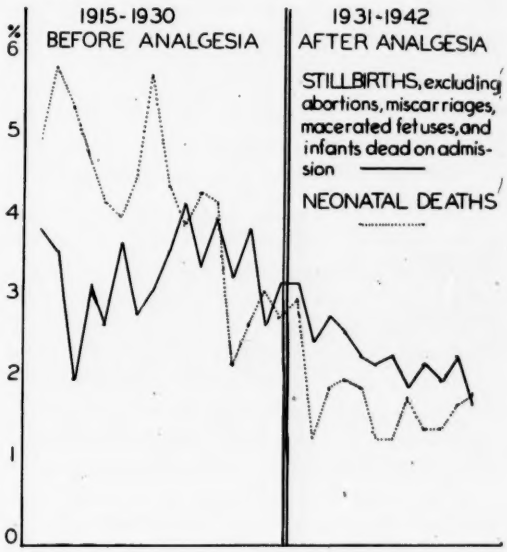


**Figure I**

### *Disadvantages*

Were not the use of the barbiturates and scopolamine occasionally attended by certain unfavorable effects on the mother or her infant the combination of these drugs would be ideal, but our experience of fifteen years has revealed certain shortcomings in all barbiturates and a potential danger in one of them.

1. Maternal. The chief disadvantage to the mother lies in the possible development of pulmonary complications — notably edema of the lungs — during labor or delivery. Such an event is signalized by the onset of stertorous respiration, dyspnea, laryngeal spasm and recession of the tongue, cyanosis, increased bronchial secretion, and bubbling râles throughout the lungs. The pulse is rapid and the blood pressure falls, the respirations eventually become slower and may cease entirely,

*continued on next page*

*From the Department of Obstetrics of Harvard Medical School and the Boston Lying-in Hospital. Presented before the Rhode Island Medical Society at its 134th Annual Meeting, at Providence, May 17, 1945.

necessitating artificial respiration. If the patient regurgitates vomitus she may easily inspire it as the result of her loss of pharyngeal reflexes. Because of this danger no patient who has recently eaten should be given the barbiturates, nor should they be administered to a patient with an acute respiratory infection because of the increased bronchial secretion which may follow their use and the increased difficulty in maintaining an open airway. This accident usually occurs during the induction of inhalation anesthesia, but it may appear in the first stage of labor.

In our experience the barbiturate involved in most of our respiratory accidents and in all of our three deaths was pentobarbital, or nembutal. Table 1 shows that in 14,676 administrations of the barbiturates the use of pentobarbital resulted in one and three-quarters times as many respiratory accidents as was the use of seconal and sodium amytal alone or combined; moreover, the only deaths which occurred were in the pentobarbital group.

**Table 1**

***Different Barbiturates used with Scopolamine***

| | Cases | Respiratory complications | Frequency | Deaths | Mortality |
|---|---|---|---|---|---|
| All barbiturates | 14,676 | 44 | 1:333 | 3 | 1:4,892 |
| Pentobarbital (nembutal) | 10,097 | 35 | 1:288 | 3 | 1:3,366 |
| Seconal and sodium amytal alone or combined | 4,579 | 9 | 1:508 | 0 | 0 |

Note: (1) Respiratory complications accompanied pentobarbital 1.8 more often than the other barbiturates.
(2) The only 3 fatal cases occurred with pentobarbital.

Gruber[1] states that in acute barbiturate poisoning the respiratory system is first depressed and that the cardiovascular system follows, both from a partial paralysis of the vagus and from the direct action of the drug upon the heart muscle. He believes that edema of the lungs is due to changes in the pulmonary vascular bed, and he notes that as little as 3 grains of pentobarbital in some individuals may produce this effect. Hanzlick[2] considers the toxic changes to be the same, and he also calls attention to interference with the viscera reflexes, such as coughing and vomiting. Moderate dyspnea is almost the rule during late pregnancy. Apparently it results from a disturbance in the ratio between the pulmonary ventilation which is increased according to Anthony and Housen[3] 57.0 per cent, while the vital capacity is increased only 4.5 per cent (Hamilton and Thomson[4]). There is normally in late pregnancy an increased congestion in the pulmonary vascular bed which can readily be demonstrated by X-ray, and which prepares the ground for the action of any agent capable of causing pulmonary edema. The familiar instances of pulmonary edema accompanied by marked cardiac dilation which may complicate preeclampsia and which cause the deaths of most eclamptics probably have their basis in this fact.

Since pentobarbital was responsible for the greatest number of respiratory complications the dosage used in the thirty-five cases showing these complications was reviewed (Table 2). It will be seen that two-fifths of these patients received during their entire labors not more than twice the average hypnotic dose, and that two of the three deaths occurred in women who had received only three grains. One of these patients died on the day of delivery of pulmonary edema and massive collapse of the lungs, and the other, a cardiac, on the eleventh postpartum day of broncho-pneumonia. Since these fatalities occurred with small doses it is probable that the patients who died possessed an idiosyncrasy toward the drug. The third patient, who received during a 40 hour labor 27 grains, died on the fourth postpartum day of broncho-pneumonia. Overdosage was certainly present in her case.

**Table 2**

***Total Dosage of Pentobarbital in cases with Respiratory Complications***

| Grains | Cases | Per cent | |
|---|---|---|---|
| 3** | 4 | 11.4 | 39.9 |
| 6 | 10 | 28.5 | |
| 7½ | 4 | 11.4 | |
| 9 | 8 | 22.8 | |
| 10½ | 3 | 8.6 | |
| 12 | 3 | 8.6 | |
| 13½ | 1 | 2.9 | |
| 15 | 1 | 2.9 | 5.8 |
| 27* | 1 | 2.9 | |
| | 35 | 100.0 | |

Note: (1) Four-fifths of the cases received not over twice the average hypnotic dose (3 grains).
(2) The largest total dose was 9 times the average hypnotic dose.
(3) Severe poisoning results when 5 to 10 times the full hypnotic dose (Goodman and Gilman). Only 5.8 per cent were in this category.

*Two of the deaths occurred in patients receiving only a total of 3 grains. The other died after receiving 27 grains during a 40 hour labor.

In Figure 2 we have compared the barbiturates and scopolamine with demerol and scopolamine as regards respiratory complications. In 2,446 administrations of demerol and scopolamine there

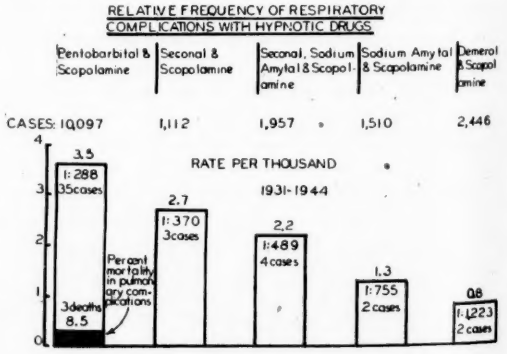


**Figure II**

were only two such complications or an incidence of only one in 1,223. This fact bears out well the claim that demerol is rarely a respiratory depressent, and, in spite of its lessened effectiveness as an adjuvant in producing amnesia, marks it as a safer drug for routine use in a large clinic.

If respiratory complications with the barbiturates should occur during labor or delivery, the anesthetic, if any is being used, is immediately discontinued and the patient is inverted by raising the foot of the delivery bed to the extreme Trendelenberg position. She is turned on her side, and her head is held over the upper end of the bed, so that the pulmonary edema fluid may run out. This is aided if necessary by the use of a mouth gag, an artificial air way, and mechanical suction. If the right heart is overloaded, venesection of 500 c.c. may be performed. The most efficient antidote for barbiturate poisoning is picrotoxin. An intravenous saline infusion is started and the drug is injected into the tubing one minim every minute until early signs of improvement occur; these are usually fine muscular twitchings first noted in the face. As soon as the patient's condition improves an amount of the drug not in excess of nine minims is injected intramuscularly.

A second maternal disadvantage in the use of the barbiturates with scopolamine is the production of excitement. Although most of this can be attributed to scopolamine, the combination of this drug with the barbiturates has in our experience produced distinctly more restlessness than when demerol has been substituted. Excitement has usually been controlled by the administration of 100 milligrams of demerol intramuscularly or by a retention enema containing two drams of paraldehyde, two ounces of ether, and two ounces of oil. Since both these methods act by further depressing the patient, our Director of Anesthesia, Dr. Bert B. Hershenson, has recently used apomorphine in a dosage of 1/100 grain with encouraging results. Apomorphine thus used in one-tenth of its usual emetic dose acts only as a stimulant.

In our opinion no drug can compare with scopolamine to produce lack of memory. The effect of an average dose lasts about two hours. Belonging to the atropine group it also inhibits bronchial secretions and is used as routine in our clinic for preoperative medication. We have found no difference in the production of excitement between the levorotatory and dextrorotatory forms nor between the ampoules and the tablets.

2. Fetal. When general anesthesia is used at delivery only about 62 per cent of the babies may be expected to breathe immediately with the barbiturates and scopolamine as contrasted with 82 per cent with demerol and scopolamine. If low spinal anesthesia is used the percentage of infants breathing immediately is greatly increased; indeed, were it not for postanesthetic headaches which occur in at least ten per cent of cases, spinal anesthesia would be ideal for forceps deliveries. Although the combination of barbiturates and scopolamine with general anesthesia results in delayed fetal respirations at birth in about twenty per cent of cases, this fraction can be lowered by the administration to the mother of three-fourths of a grain of ephedrine sulphate when the general anesthetic is begun. This expedient was suggested by Dr. Weston Sewall, and, combined with light anesthesia, has produced good results in his experience. A short series of cases under scopolamine alone led us to believe that this drug has little or no effect on fetal respirations. Finally, our results show that although one baby in five delivered under the barbiturates and scopolamine may be expected to show transitory apnea at birth, our stillbirth and neonatal death rate, as shown in Figure 1, has actually fallen during the period of their use; moreover, in the fifteen years of their employment we are unaware of any cases of mental impairment that have resulted in the children so delivered.

### *Conclusions*

1. The barbiturates with scopolamine will produce satisfactory amnesia during labor in 85 per cent of cases. Sixty-two per cent of the babies will breathe immediately at birth. There is no increase in the fetal mortality.

2. Demerol with scopolamine will produce satisfactory amnesia in 70 per cent of cases. Eighty-two per cent of the babies will breathe immediately at birth.

3. The barbiturates with scopolamine result in a higher frequency of respiratory complications than do demerol and scopolamine.

4. Pentobarbital and scopolamine produce the highest incidence of respiratory complications. Our only deaths from this cause occurred when pentobarbital was used.

5. The treatment of acute barbiturate poisoning is discussed.

6. Measures to combat the excitement caused by scopolamine are described.

7. A measure to combat fetal apnea attending delivery under general anesthesia is suggested.

### References

[1]Gruber, C. M. Am. Jour. Obst. & Gynec., 33:729, 1937.

[2]Hanzlick, P. J. California and Western Med., 46:302, 1937.

[3]Anthony, A. J. and Hansen, R., Ztschr. f. Geburtsch. u. Gynäk. 105:183, 1933.

[4]Hamilton, B. E., and Thomson, K. J. The Heart in Pregnancy and the Childbearing Age. Little Brown & Co. Boston, 1941, p. 139.

# SMOKE AND HEALTH*

CLARENCE A. MILLS, M.D.

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THE Industrial Revolution and modern machinery have wrought great changes in human existence. Many of these changes have been toward a higher type of life, but such blessings have not been un-mixed with evil. Growth of large metropolitan centers of great population density, and the use of enormous tonnages of coal for heat and power, have created certain hazards to health the true seriousness of which are finally coming to be realized. Quite aside from the social and economic aspects of city slums, the pollution of their atmosphere poses health problems quite as serious as those which were relieved by water purification plants a half century ago. Close analysis of the health damage wrought by such air pollution provides an ample basis for smoke clearance campaigns entirely aside from any probable reduction in laundry bills, painting and redecorating costs, etc.

The average person takes two to three quarts of food and drink in through his mouth each day, but in the same time he takes into his lungs *10 to 12 thousand quarts* of whatever atmosphere happens to be around him. Most of the dirt or pollution in this large volume of inspired air is caught and held in his respiratory system.

Early in the present century Ascher[1] pointed out the increased respiratory disease hazards faced by people living in atmospheres polluted by coal smoke. He found the pneumonia mortality 135 per cent higher in men of the Ruhr valley than in Prussian men of similar age groups, with the death rate highest in the industrialized areas of worst pollution. Pneumonia caused 6 times more nursling deaths in industrial than in rural populations. Ascher also found that coal smoke quickened tuberculosis deaths in laboratory animals and increased their susceptibility to aspergillus pneumonia. The damaging effect on people was greatest in those industrial areas where humidity was high and fogs prevalent.

*An address presented before the Providence Medical Association, at Providence, on Monday, April 2, 1945.

In 1912 White and Marcy[2] presented data showing a close relationship between sootfall and pneumonia death rates in the 27 wards of Pittsburgh; with tuberculosis the relationship was less regular but still significant. They used only total mortality data, making no breakdown by sex or color. In 1938 Haythorn and Meller[3] found that it concerned Pittsburgh men much more than women, for the male death rate from pneumonia was 50 to 90 per cent higher than the female in each year studied (1927-1936). They offered no explanation for this higher male rate. Necropsy findings of more marked anthracosis in lungs where healing had been by organization of unresolved pneumonia was suggested by them as probably due to a clogging of lung lymphatics with carbon particles.

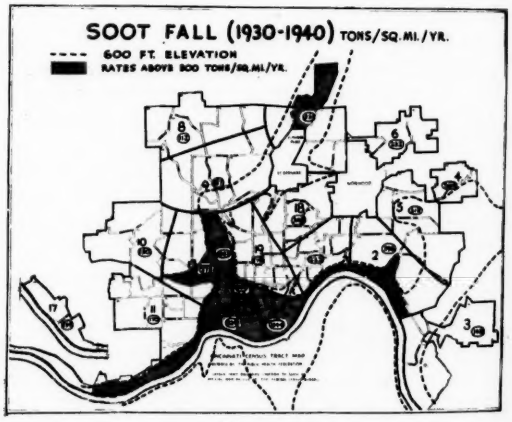


**Figure 1**

Certain industrial cities present sharp local differences in the degree of pollution, due to their local topographical features. Cincinnati and Pittsburgh are two such cities. In order to supply definite information on the health aspects of smoke pollution, a close survey was made of sootfall and respiratory disease rates in the 19 sootfall districts of Cincinnati and the 96 of Pittsburgh. Death rates were calculated by sex and color on the basis of census tract population statistics, using death statistics for 1930 and 1931 and the census figures of 1930 (those for 1940 were not available when this study was made).

Figures 1 and 3 show the sootfall in both cities to be highest in the low-lying areas of the river bottoms. Figures 2 and 4 indicate the close relationship of high pneumonia death rates (male, white only) to heaviest sootfall. In Pittsburgh conditions are worst in the so-called "Golden Triangle" and along the rivers. In the section of the city lying north of the Alleghany and Ohio rivers, heaviest sootfall rates extend eastward from the large steel mills and railroad switching yards on both sides of the Ohio along Brunot Island. Winter smoke palls, however, tend more to settle down over the low-lying area across from the Golden Triangle and it is there that pneumonia rates are highest.

### *Sootfall and Pneumonia Rates*

Sootfall and pneumonia rates in Cincinnati are highest in the basin districts along the Ohio river and northward for several miles up the Mill Creek bottoms. No sootfall figures are available for the unshaded portion of the upper Mill Creek Valley (figure 1), but conditions there are quite similar to those above and below. The 3 more elevated suburban sections showing high pneumonia rates are each located adjacent to railroad switching yards.

In Cincinnati the 10-year average sootfall ranges from 134 up to 1,544 tons per sq. mi. per year, while in 20 months of 1938-40 that of Pittsburgh districts varied from 28 to 400 tons per sq. mi. per month. Male, white pneumonia rates varied from 41 to 165 per 100,000 population for Cincinnati and from 0 to 7,852 for Pittsburgh. Not only are both sootfall and pneumonia rates much higher in Pittsburgh than in Cincinnati, but in both cities they are highest in the low-lying industrial areas. Correlation coefficients between male, white, pneumonia death rates and sootfall gave $+0.4742 \pm 0.0542$ for Pittsburgh and $\pm 0.7900 + 0.0581$ for Cincinnati. Corresponding chi-square values found were 4.0 and 6.7. These findings from correlation tables and chi-square tests indicate a relationship quite beyond the realm of chance. Use of the data on sootfall and respiratory deaths in Pittsburgh as found in the article by White and Marcy[2] gave even higher values. Correlating their data on sootfall with their pneumonia and tuberculosis death rates in the 27 city wards, coefficients of $+0.9300 \pm 0.0175$ and $+0.5163 \pm 0.0952$ were found; corresponding chi-square values were 11.0 and 11.3.

A similar close relationship exists between pneumonia rates and such socio-economic indices as rental values, degree of overcrowding, family income, etc., as well as between these indices and sootfall rates. It has been assumed in the past, therefore, that the high respiratory disease rates of slum areas are more likely due to these adverse socio-economic factors.[4] A definite indication that such is not the case is obtained by comparison of male and female rates. In the cleaner air of the higher suburban districts little difference exists between male and female pneumonia or tuberculosis rates, but in the polluted air of the bottoms districts the increase in male rates is almost twice as great as that of the female.

**Table I**

***Cincinnati Annual Death Rate per 100,000 Pop. (White only, 1930-1)***

| *Census tracts* | *Pneumonia* | | *Tuberculosis* | |
|---|---|---|---|---|
| | *Male* | *Female* | *Male* | *Female* |
| Hilltop | 70 | 67 | 51 | 45 |
| Low-lying | 141 | 106 | 100 | 68 |
| Increase (per cent) | 101 | 58 | 95 | 51 |

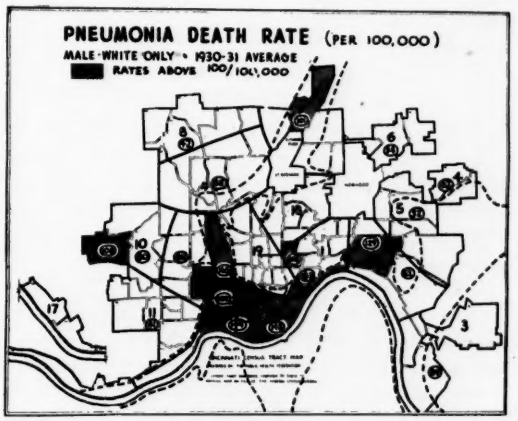


**Figure 2**

Pneumonia death rates for the total rural population of Ohio are 4 to 5 per cent higher for males than females, just as in the hilltop suburbs of Cincinnati; but in Ohio's urban population (towns and cities of 2,500 or more) male pneumonia rates are 28 to 30 per cent higher than female. It would seem obvious, therefore, that something other than socio-economic factors must be at work, for such factors would affect the women fully as much as the men with whom they live. Indeed the men are usually better nourished than the women and spend less time each day in the crowded family living quarters. In the 96 sootfall districts of Pittsburgh the ratio of male to female pneumonia death rates bears a significant relation to sootfall, with a correlation coefficient of $+0.2947 \pm 0.0642$ and a chi-square value of 15.2, meaning that male pneumonia deaths predominate more the greater the atmospheric pollution.

Among the 3,624 pneumonia cases reported in Pittsburgh during the years 1937, 1938 and 1939, there were 85 per cent more in males than in females. There were 95 per cent more males than females among some 1,500 pneumonia cases admitted to the Cincinnati General Hospital during the 4-year period, 1936-1940, from the city's in-

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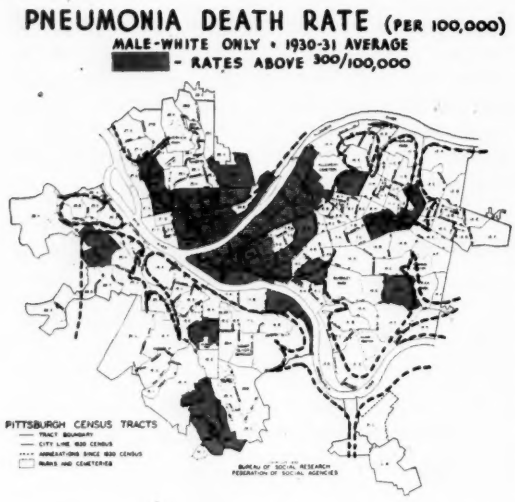



digent population. The great majority of these came from low-lying industrialized areas. There can be little question, therefore, that respiratory disease is much more severe in badly polluted districts and that men are much more affected than women.

It might be suggested that men of low economic groups would be exposed to more frequent chilling than would their wives, that their high pneumonia rate is due to their greater outdoor exposure.

Such a suggestion is negatived, however, by the fact that rural males of Ohio have very little more pneumonia than rural females (4 to 5 per cent), and by the fact that there is very little sex difference in suburban areas of industrial cities. In both Cincinnati and Pittsburgh, pneumonia rates also fall rapidly with each 100 feet of ascent above the bottoms districts.

**Table II**

***Pneumonia and Elevation above Smoky Areas***

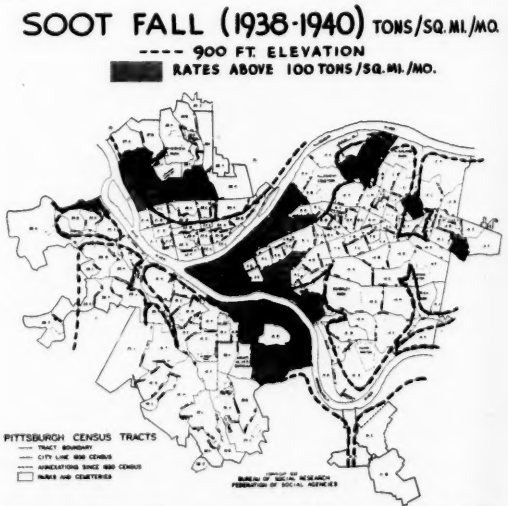
| Cincinnati | | Pittsburgh | |
|---|---|---|---|
| Elevation above sea level (ft.) | Pneumonia death rate per 100,000 population (male, white only) (1930-1) | Elevation above sea level (ft.) | Pneumonia death rate per 100,000 population (male, white only) (1930-1) |
| 400 | 155 | 700 | 949 |
| 500 | 90 | 800 | 641 |
| 600 | 72 | 900 | 310 |
| 700 | 72 | 1,000 | 306 |
| 800 | 67 | 1,100 | 267 |
| 900 | 61 | 1,200 | 251 |

This does not mean that altitude per se affords protection against penumonia, for Denver has a higher pneumonia death rate than Cincinnati. It does mean, however, that people living on the city hilltops escape most of the polluting material which is discharged mainly into the air of the bottoms districts. Railroads enter these cities along valley routes, and industrial users of coal have located largely along the railroads.

### *Cancerigenic Materials in Coal Smoke*

The first suggestion that coal smoke contained cancerigenic materials originated a half century ago with the observation of a high frequency of skin cancer among London's chimney sweeps.[5] Since then a variety of very potent cancer-producing compounds have been isolated from the coal tar which condenses upon the soot particles of smoke when coal is burned with a smoky flame. These compounds volatilize at the low fire-box temperatures, about 500°F (5), which favor smoke production, while at the higher temperatures of stoker-fired furnaces they are almost completely consumed along with the other volatile fractions of the coal. Soot from a soft coal grate fire may be almost half tar, while that from a stoker-fired furnace usually contains a very small amount.[6]

Because tissues of the air passages and lungs come into contact with so much more of the contaminated air of industrial cities than does the skin or any other body structure, one might well expect them to show a higher prevalence of cancer development. Doubtful success has attended experimental efforts to induce lung cancer in susceptible strains of mice by forcing them to inhale soot-laden air, but this is not exactly analogous to the actual human problem. The large soot particles, which collect in chimneys or settle to the ground outside, seldom find their way into the air sacs of the lungs; they adhere rather to the air-passage linings higher up. Only the extremely fine smoke particles, which drift for many miles over the countryside without sedimentation, can find their way down to the lung tissues. No one has yet used this extremely fine type of smoke particle in attempts to produce lung cancer.



If the cancerigenic coal tar carried on smoke particles is producing human malignancy, then one would really expect a greater effect upon the upper air passages than upon the lungs in districts where the larger smoke particles predominate. Farther away in the smoky stream, after sedimentation of the larger particles has taken place, one would expect to find more nearly equal involvment of air-passage and pulmonary tissues. Curiously enough, an examination of cancer mortality statistics in Cincinnati indicates that just this effect may be taking place.

In Cincinnati greatest smoke production occurs in the low-lying downtown basin districts. Not only are railroad engines and industrial users of coal more active there, but home heating is largely by grates and small inefficient stoves in which are burned the cheaper high-volatile coals. Prevailing air movement throughout the year is from the south-west, so this basin smoke floats north-eastward up over the hilltop suburbs. In examining the Cincinnati cancer statistics, therefore, I divided the city's 107 census tracts into 3 districts. One includes the low-lying bottoms along the Ohio River and up Mill Creek Valley, as well as the immediately adjacent hillside areas. Another covers some 15 tracts extending northeastward under the smoke stream which originates in the downtown basin area. The third group is composed of the remaining portions of the city. Table 3 sets forth the differences in frequency of various types of cancer for these 3 census tract groupings.

Because of higher death and birth rates, the basin population has a lower mean age distribution and a lesser frequency of total cancer deaths than is found for the city as a whole. For the tissues of the respiratory tract, however, it has a distinctly higher cancer frequency. Cancers of the nose, mouth, tongue, pharynx, larynx, and oesophagus have been grouped under a single heading because they are all more or less directly exposed to the contaminated air or swallowed nasal mucous.

The most significant feature of the data in Table 3, however, is the markedly higher lung cancer rate among people of those census tracts lying northeastward from the downtown basin districts. The rate is almost 4 times as high there as in the less smoky hilltop suburbs, while cancers of the upper air passages show only 56 per cent greater prevalence. People of this region show moderately increased rates even for cancers of the stomach and rectum. For tissues which could not come into contact with the breathed or ingested coal tar compounds, the breast for instance, the cancer rate is lower than in other suburban areas.

These sectional differences in cancer death rates within Cincinnati suggest interesting possibilities and deserve closer inspection. Although most of the death certificates are made out without autopsy, it is difficult to see how errors of diagnosis could account for the differences pointed out. Any such errors for lung cancer would most likely be those of omission, but they should operate just as frequently in one part of the city as in another. Oughterson found somewhat analagous differences in cancer incidence in his New Haven study.[7] Cancers of the air and food passages above the diaphragm were about 3 times as numerous among the New Haven poor as among the well-to-do, while in the more distal portions of the digestive tract (and in the breast) the differences were negligible. Although the evidence strongly suggests the presence of cancerigenic air contaminants in the smoky districts, the proof of its relation to human cancer is still not entirely settled.

### *Seasonal Phases of Smoke Problem*

The smoke problem is worst on days of low air movement and in the cooler seasons when there are more water particles in the air to hold the soot and fly-ash suspended. On windless days of autumn and winter "smog" blankets (composed of smoke and fog) completely hide the bottoms districts and sometimes pile up over the neighboring hilltops. Boiler steam discharged from fixed and movable power plants plays an important part in cold weather fog formation, for cold air has little water-holding capacity. No attention has been given to this phase of the city smoke problem, although it is an important part of the matter.

*continued on next page*

**Table III**

***Regional Differences in Cincinnati Cancer Death Rates — Both Sexes and Colors 1939 to 1941 inclusive***

| | District 1 C. T. 1-29, 91, 60, 61, 103-6 | | District 2 C. T. 30-41, 50, 66, 67 | | District 3 all remaining C. T. | |
|---|---|---|---|---|---|---|
| | Number* | Rate** | Number | Rate | Number | Rate |
| Lungs and pleura | 33 | 5.9 (144)*** | 31 | 16.2 (395) | 25 | 4.1 |
| Upper air and food passages | 37 | 6.6 (132) | 15 | 7.8 (156) | 31 | 5.0 |
| Stomach and duodenum | 88 | 15.7 (80) | 44 | 23.0 (117) | 121 | 19.7 |
| Rectum and anus | 59 | 10.5 (103) | 23 | 12.0 (118) | 63 | 10.2 |
| Breast | 65 | 11.6 (53) | 32 | 16.7 (76) | 135 | 22.0 |
| Total population, 1940 census | 186,839 | | 63,772 | | 204,999 | |

*Number = 3-year total.

**Rates = deaths per 100,000 population per year.

***Figures in parentheses for districts 1 and 2 are percentage comparisons with analogous rates in district 3 (district 3 rates = 100).

Air at 90°F. can hold about 11 grains of water vapor per cu. ft. while at 15°F. its capacity is 0.6 grains. The normal nocturnal drop in temperature does little in summer time except to cause a deposit of dew upon cool surfaces but, as autumn coolness comes on, night-time drops readily bring the air to the saturation point. Nocturnal fogs then begin to appear in country as well as city. In industrial cities, however, fixed and movable steam power plants add to the cooled air an additional load of water particles which must remain as fog.

In Cincinnati this added steam each day exceeds the total water-holding capacity of 15°F. air. Considering an air mass extending upward 500 feet above the industrial valleys (and correspondingly less over the more elevated suburbs lying east of Mill Creek), the Cincinnati railroad engines alone each day add 0.5 to 1.0 grain of water per cu. ft. of this air blanket. This added steam is negligible in summer warmth for it then quickly changes to invisible water vapor, but on cold days of low air motion it must remain as a fog blanket over the city. In it are then suspended all the flue products of the city's fires, and it is this foul mixture that people must breathe. Low-lying regions are blanketed by this "smog" much more often than are the hilltops and it may well be this fact which accounts for the excessive respiratory disease hazards there prevailing.

Industrial power plants condense most of their waste exhaust steam for heating purposes during the cooler seasons, but railroad engines belch forth into the city atmosphere their entire output of boiler steam, and in it are mixed their coal combustion products. Forced draft in the fire-box blows large quantities of fly-ash as well as cinders out with the steam. It begins to appear, therefore, that the movable steam engine may be providing one of man's worst winter health hazards in urban areas.

The present study offers no means of identifying the harmful effects of individual smoke constituents. Pure carbon soot is probably harmless, but flue carbon arising from soft coal combustion is far from pure. It has condensed upon it a varying load of coal tar which volatilized under the same fire-box conditions making the coal burn with a smoky flame. This fact is of great possible importance because of the cancerigenic compounds contained in the tar products.

Fly-ash is probably the most harmful smoke constituent. Chemically it is a siliceous mixture somewhat similar to the rock dust which has killed hundreds of quarry and tunnel workers from silicosis. While outspoken silicosis is uncommon among city residents, it is possible that a lower grade of irritation in sinuses, air passages, and lungs may be responsible for much of the increased respiratory disease hazard in polluted urban atmospheres. Sulphur gases in coal smoke add to this fly-ash irritation, particularly when coals of high sulphur content are burned. St. Louis obtained considerable help in her sulphur problem by preliminary washing of her high-sulphur coals.

### *Discussion*

There now seems little doubt that coal smoke pollution of city atmospheres constitutes a health problem of the first magnitude. Pneumonia, tuberculosis, and lung cancer are all markedly more prevalent among people living in the most polluted areas of industrial cities. Doubtless a similar situation would be found for sinusitis, bronchitis, and other minor respiratory diseases if reliable statistics were available. The fact that this respiratory hazard is so much greater for men of the city laboring classes than for their wives, and that rural outdoor laborers face no such increased respiratory danger, points to atmospheric pollution as the responsible factor.

A half-century ago city water supplies were purified only after it had been clearly demonstrated that their pollution was responsible for widespread sickness and death from the enteric fevers. And so we may now see earnest attempts at clarification of city atmospheres, in view of the evidence set forth in these pages. It will cost something for this elimination of air pollution, just as it did for water purification; and there are strong commercial interests opposing air clearance just as there were those who fought the installation of expensive water purification systems. It should be borne in mind, however, that disease itself is expensive. Respiratory diseases (including influenzal infections) account for about 70 per cent of the working time lost by employed persons on account of illness. A saving of even two such lost days a year for each employed person would probably pay the total cost of smoke clearance in any city.

Remedial steps to be taken should cover 4 points. Output of carbon soot and the coal tar products should be prevented by use of low-volatile coals or of proper mechanical equipment to burn the high-volatile varieties smokelessly. Escape of fly-ash should be controlled by proper trapping devices and reduction in stack or flue draft. High sulphur coals should receive preliminary washing. Railroads should be compelled to change to Diesel or electric power within metropolitan areas. The time has arrived when the smoke problem should be considered on a health basis alone, without regard to the dry-cleaning or laundry savings which would accrue from smoke elimination.

Little can be said with reference to the local situation in Providence until a careful survey has been made of her air pollution and its relation to respiratory disease in the population. Nearness to

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# COORDINATING INDUSTRIAL MEDICINE AND INDUSTRIAL HYGIENE IN MODERN INDUSTRIAL PRACTICE*

C. O. SAPPINGTON, M.D., DR.P.H.

The Author. *C. O. Sappington, M.D., Dr.P.H., of Chicago, Illinois. Editor, Industrial Medicine; Industrial Health Consultant.*

SURELY no proof is needed for the establishment of the socio-economic importance of occupational illness and the injurious effects of occupational exposures, at least for those who have been reliably informed by recent experiences. Although occurring in less frequency than industrial accidents and non-industrial illness, occupational ailments cause considerable loss of time and money to employees and employers, and constitute a major problem in socio-economic adjustment and compensation adjudication.

Moreover, it is now considered axiomatic that control and prevention are far superior to cure, viewed from any of the relationships concerning occupational disease problems.

What I shall attempt to do, therefore, is to outline, discuss, and integrate the industrial hygiene engineering and industrial medical methods of control of the occupational environment and of occupational illness — mention some of the technical difficulties which have arisen, consider practical application of methods in the different groups interested, speak briefly concerning the evolution of control measures, and, finally, attempt to come to some rational conclusions and recommendations.

### *Control Methods*

In considering the *engineering control methods*, we are concerned with the following objectives: (a) investigation of occupational conditions; (b) the measurement and evaluation of occupational exposures by scientific methods; and (c) the application of indicated control measures. Specifically, the physical and hygienic survey of plant conditions includes: (1) occupational history and analysis; (2) information with respect to materials and processes; (3) sampling and analytical procedures; (4) the rating of occupational exposures by comparing the findings with accepted criteria; (5) the appraisal of the efficiency of protective devices, such as exhaust ventilating systems and respirators; and (6) an adequate and proper interpretation of all of this information, so that it can be practically applied to the industrial problem involved.

If the above procedures provide information which indicates the necessity for using various kinds of protection, the following have been found useful in different combinations, as specific methods of control: (1) the use of mechanical devices, such as exhaust ventilating systems, respirators, masks, helmets, and the like; (2) a change of processes (this may mean changing a hot process to a cold one, using wet methods to help allay dust, or isolation or segregation of the process; (3) substitution of nontoxic materials for those of proved toxicity; (4) educational programs for employees, employers, personnel departments, physicians and nurses; and (5) the continued maintenance and checking of the efficiency of the protective equipment.

It is not claimed that the above list is exhaustive; there may be other measures of minor importance, but it is believed that the principal ones have been named, and it is also known that they have been used successfully.

The *medical methods of control* are likewise well known, but will be mentioned briefly: (1) preplacement physical examinations with which is associated a thorough occupational history covering the entire work life of the individual; (2) periodic examinations of employees insofar as this is possible, but especially in instances where known hazardous exposures exist; (3) laboratory examinations, both in preplacement and periodic examinations, to obtain supplementary evidence and to determine whether the applicant or employee shows signs of the effects of previous occupational exposure; (4) educational programs, constantly acquainting employees and employer with the need for the use of medical control procedures; and finally, (5) continuous and careful medical supervision, involving the principles of employee placement and adjustment, as well as continued study of environmental conditions and the proper functioning of protective equipment.

It will be observed, then, that the object of the engineering measures, simply stated, is to establish the extent and nature of the occupational

*continued on next page*

*A lecture presented in the Extension Course in Industrial Health and Hygiene under the auspices of the Department of Medical Sciences, Brown University, at Providence, March 20, 1945.

exposure presented and to recommend the use of methods in the industrial environment to control the hazards where found; while the object of medical procedures is to determine the nature and extent of the effects of the environment on the bodies of the exposed employees, and similarly, to recommend and institute measures for control and prevention.

### *Technical Difficulties*

Although it will not be possible to discuss all the technical difficulties, emphasis will be placed upon the lack of proper coordination or integration of engineering and medical methods of control and the resulting confusion. It often happens, for instance, that the appraisal of hazards in an industrial environment is interpreted entirely separately from the medical findings on employees working in that environment. Moreover, it more frequently occurs that the medical data constitute the sole evidence upon which judgment is made as to the existence of potential occupational illness hazards.

The lack of proper coordination is here evident, and it is based upon neglect of the simple but vital principle that occupational illness is the direct result of exposure to deleterious conditions, materials, or processes, found in an industrial environment. Adequate use cannot, therefore, be made of the possibility of a distinct cause-and-effect relationship unless the interpretation of the factors in this possible cause-and-effect relationship is made by qualified persons who understand the evaluation of an occupational disease exposure in terms of its effects upon the human body.

We cannot expect that the engineer will be able to do diagnostic work — that is the province of the physician — nor should the engineer be expected to be responsible for toxicological appraisals of exposure data — that again is the province of the physician—although the engineer in some instances may be able to tell what will probably take place under certain exposure conditions; likewise, in many instances, the industrial physician or the private practitioner who has had little training in or contact with the engineering principles of industrial hygiene, may not fully appreciate the importance of the environment as an etiological factor in the production of occupational illness.

We thus have to contend with a condition in which the engineer is interested in his phase of the work, chiefly the consideration of the factors in the industrial environment, as far as acquiring data on industrial exposures is concerned, and the physician largely occupied with diagnostic problems. The result has been a lack of real coordination and integration of causal factors with the physiological functions of exposed employees.

This lack of integration has probably been largely due to the scarcity of what we might call "qualified interpreters," who understand and appreciate the principles involved in the engineering and the medical parts of the problem and who, therefore, should be able to make interpretations in simple terms, so that this combined information may be issued to and used by the employers, insurance companies, attorneys, and others to whom it is of vital concern.

The physician-industrial hygienist is probably the ideal type of person who can adequately take the responsibility for this situation, although others can and have done so, as the result of practical experience. Unfortunately, few physician-industrial hygienists have been developed, and in order to make useful the information gained by application of the methods of control of occupational illness, we cannot depend entirely upon those few who have fortunately been able to secure training in the fundamentals of both industrial medicine and industrial hygiene.

It is obvious that we cannot expect the engineers to become physicians; it does seem reasonable, however, to expect the industrial physician and the private practitioner insofar as he can, to superimpose upon his medical background and experience at least an appreciation and working knowledge of the principles of industrial hygiene, so that he may be in a position to integrate intelligently the etiologic and pathologic factors concerned in occupational illness. Certainly the majority of occupational disease problems which come up for final decision are medical in aspect, and it seems rational to say that the physician must, in the final analysis, take the responsibility for these decisions. There are now numerous examples of the smooth functioning of such a principle to be found in the work of the office of Industrial Hygiene of the U. S. Public Health Service, the Bureaus of Occupational Diseases in various state health departments, and in similar relationships where the technical and administrative policies of the group are under the guidance and control of an experienced medical officer.

As Glenn Frank has so well stated:

"The future of America is in the hands of two men — the investigator and the interpreter. We shall never lack for the administrator, the third man needed to complete this trinity of social servants. And we have an ample supply of investigators, but there is a shortage of readable and responsible interpreters, men who can effectively play mediator between specialists and layman. The practical value of every social invention or material discovery depends upon its being adequately interpreted to the masses. Science owes its effective ministry as much to the interpretative mind as to the creative mind. The knowledge of mankind is advanced by the investigator, but the investigator is not always

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# The RHODE ISLAND MEDICAL JOURNAL

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## PUBLIC HEALTH EXPENDITURES

THE compilation by the Rhode Island Public Expenditure Council of comparable financial data on all thirty-nine cities and towns in the State presents for the first time the opportunity to check the expenditures for health by Rhode Island governments. Probably no clearer picture has ever been presented of how local communities have shifted the responsibility for public health programs to the state and federal governments than the comparative analysis of the Council for the fiscal year ending in 1943.

Of the thirty-nine cities and towns only eight spent more than $2,000 for health. More amazing is the fact that of the remaining thirty-one communities six spent nothing, twelve spent less than $100, and twenty-one spent less than $500. And during the same fiscal year there were but three towns that spent less than $1,000 for welfare, three that spent less than $1,000 for public safety, four that spent less than $5,000 for public works, and none that spent less than $10,000 for education!

This situation is one that warrants sober thinking on the part of every citizen. The conquest of disease is basically a work of prevention, and until every city and town becomes conscious of its duty to develop effective and complete programs at the local level, we can look for no real control in checking the spread of disease.

Four years ago the Providence Medical Association in its publication, *Medical News*, reviewed the situation in Rhode Island as regards the appointment of laymen with little or no background in public health matters as town health officers. In that study the provisions of the statutes were reviewed and it was pointed out that the individual communities have personal responsibilities that cannot be ignored.

The *News* reported at that time that, "The fact that the office (health officer) is a part-time one in many communities, paying but little salary, and granted to a resident of excellent character, is no justification for ignoring the importance of the problem of raising the standard of health education and care, and sanitation, in every town, regardless of its population total or rural location."

The recent report of the Public Expenditure Council warrants the attention of every town council. It will avail little in the long run to provide sizable sums for public safety, public works, welfare and education, and at the same time to allocate miserly sums, if any, for the development of public health programs. To surrender the task to the state government, which in turn is too often inclined to seek Federal funds as grants-in-aid, is merely developing a higher taxation for a service that should be performed at the local level at a lesser cost.

## STATEWIDE REPRESENTATION

The by laws of the Society provide that the Council shall carry out the mandates and policies of the Society, and in so doing it has complete power and authority (within the scope of the by laws) to perform all acts and transact all business, and to manage and conduct all of the property, affairs, work and activities of the Society.

The volume of work that has been carried on in the past two years since the reorganization of the Society has been tremendous. The Council has been faced at each meeting with a lengthy agenda calling for many decisions of vital concern to each component society. The scope of the work has increasingly emphasized the necessity for attendance at each meeting of a representative from each district medical society. The action, therefore, of the House of Delegates in May in adopting an amendment to provide that an elected alternate Councillor may serve in the absence of the Councillor of that Society, or of an eligible past president of the State Society from that district, is a step in the right direction.

It is to be hoped that this new arrangement will assure statewide representation at every meeting, and will also give each district society a more intimate knowledge of the organizational work of the Society as supervised through the Council.

## FOOD RATIONING

The work of the Society's advisory committee to the OPA in Rhode Island represents another of the many patriotic tasks carried out by the medical profession during this war. That the job is not an easy one, not pleasant, we can well imagine, but this committee has certainly given freely of its time to assist both the physician and his patient in the matter of procuring necessary supplemental allowances for food ration points for illness.

The recent changes affected in the program by the committee whereby a new form has been adopted and tables prepared to assist the physician in his task of prescribing rationed foods, represents a work that merits the complete support of every member. With the official consumer point chart available to him each month and with the table also available to indicate the extent to which rationed foods may be granted for illness by local boards without review by the medical advisory committee, the task now facing each physician is that of cooperation in prescribing in so far possible within the structure of the wartime regulations imposed on all the people.

## WOMEN DOCTORS

In a recent number of the JOURNAL of the American Medical Association there was an article telling of the good work of women doctors during the war. That article has to do with women in the armed forces, but as all the old and crippled among us men folks know, there is a lot of good work being done on the home front.

We are being helped in this by a group of able, conscientious women doctors. From Dr. Margaret Hardman, getting mighty close to ninety and still attending our medical meetings, down to some trim young flappers, they are doing their part nobly.

This is emphasized by the section on District Society Meetings in our May number. You will note there that the positions of President and Secretary-Treasurer in the Washington County Medical Society are both held by women. Dr. Frances A. Kenyon is President and Dr. Julianna R. Tatum is Secretary-Treasurer.

We wonder if any other district society, even in "up and coming" other portions of our country can show a similar departure from traditional ways as made here in conservative New England.

Best wishes to Dr. Frances A. Kenyon, to Dr. Julianna R. Tatum and to the Washington County Medical Society.

## NEW AUTO LIGHT REGULATIONS

New regulations relative to lights and lighting equipment on motor vehicles in Rhode Island became effective on July 1. Doctors desiring to use a spotlight on their car must make written application to the Registrar of Motor Vehicles. The executive office of the Society has been informed that a doctor's auto can be classified as an authorized emergency vehicle.

No person shall, according to the new rules, permit any motor vehicle owned or operated by him, except an authorized emergency vehicle, "to display, while on a public highway: a spot-light; nor a flashing light, except directional signals and stop-lights; nor a colored light other than amber, visible from in front of the vehicle, except such outline marker lights as may be required by Interstate Commerce Commission regulations."

Also, the rules state that "Fog lamps, if used, shall be rigidly affixed to the motor vehicle below the level of the headlamps and shall be so aimed and focused that no part of the light beam shall rise more than 18 inches above the ground at a distance of 75 feet or more in front of the vehicle . . . . ".

**Applications for authorization to carry special lights as an emergency vehicle may be secured from the Registrar of Motor Vehicle, from police stations, and from the executive office of the State Medical Society.**

LT. RAYMOND LUFT, MC, USNR

of Warwick, R. I.

*Died, June 23, 1945*

LIEUTENANT RAYMOND LUFT, MC, USNR, superintendent of health in the City of Warwick on leave of absence on duty with the United States Navy, is the third member of the Rhode Island Medical Society to die while serving with the armed forces in World War II. Shortly after entering the Navy he was assigned to the auxiliary personnel attack ship *USS Henrico,* and participated in the invasion of Normandy. Sent to North Africa later to prepare for the invasion of southern France, Dr. Luft became ill and was transferred to a hospital in Naples, and shortly afterwards he came back to the United States. After hospital treatment here he was assigned as medical officer for training units at Harvard and Tufts College, a position he held until he was hospitalized ten days prior to his death.

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the best interpreter of his discovery. Rarely, in fact, do the genius for exploration and the genius for exposition meet in the same mind. . . . The investigator advances knowledge. The interpreter advances progress. History affords abundant evidence that civilization has advanced in direct ratio to the efficiency with which the thought of the thinkers has been translated into the language of the workers."

It has also seemed to us that the regular routine physical examination must undergo considerable adjustment and change before it can be properly applied to occupational disease potentialities, both in the routine examination before employment and during employment on hazardous jobs. The physician surely should have in mind those conditions and defects which may become aggravated by the specific exposure which the employee is to meet or has met. The physical examination results should, therefore, be interpreted with due regard for the possible effects of the industrial environment. In other words, the physician should take into consideration particularly the nature and severity of the exposure into which the employee is going, in evaluating the defects or abnormal conditions found on physical examination — and the same would apply to periodic examinations. This would appear to be a more initelligent application of the preplacement and periodic examinations than has been widely and generally made heretofore.

To apply these principles successfully, the examining physician can well prepare himself to give an intelligent answer to the following questions: (1) Do you know the nature and severity of the occupational exposure into which the examinee is going? (2) Are you satisfied that the examinee does not possess any abnormal conditions or defects which might be aggravated by the occupational exposure? (3) Do you know the nature of the protective devices which are provided for the use of the employee and whether such devices are known to function properly?

Through intelligent interpretative comments in the answers to these questions, the physician can serve industry much more efficiently than he usually has done generally in the past.

### *Practical Application of Methods*

In applying the principles of coordination and integration to the more efficient use of information regarding the control of occupational illness, besides the engineering and medical problems, we are confronted with the problems of employers, insurance companies, attorneys, and industrial commissions. We cannot entirely separate the curative, legal and compensation aspects from those of prevention and control, for we learn preventive methods largely through the so-called "trial-and-error" system. What we know about preventive medicine, for instance, was largely gained through repeated and collected experiences concerning the manifestations of disease and the ways in which such diseases have been contracted. This principle applies no less to the prevention and control of occupational illness, and it is necessary that preventive methods be developed through the continuous observation and study of the avenues through which occupational diseases develop; in other words, in our time at least, it will be impossible to divorce the study of the occurence and effects of occupational diseases from the study of preventive principles if advancement is to be accomplished.

Let us mention some examples: it means practically nothing to the employer to tell him that he has air in the breathing zone of his employees in which there are fifty million dust particles per cubic foot of air; that the free silica content of this dust amounts to 35%; and that a particle size distribution study shows the majority of the particles to be below three microns in greatest diameter. Nor does it do the employer much good to find out that he has, in certain processes, a lead-in-air content of 0.6 milligram of lead per cubic meter of air, or a concentration of 1500 parts per million of carbon monoxide, or perhaps a concentration of 200 parts per million of benzol vapor. (These data are merely cited as examples, of dust, fume, gas, and vapor hazards — there being many others of course which are of importance.) What the employer wishes to know is the significance of these figures, and what they mean in terms of possible functional change, disease, or disability, among his employees. Someone must explain these things to him, therefore, promptly and plainly.

Insurance company representatives, including insurance engineers, claim men, and underwriters, ask the same questions. The engineers desire to know just what exposure would be safe in different kinds of processes and operations. The underwriting group wants to know whether Plant A, as surveyed, is a good risk to put upon the books.

Attorneys and members of industrial commissions desire to know whether a given set of employment conditions represents an actual occupational disease hazard which is capable of producing disease, whether the employee actually has the occupational disease alleged, and whether such disease was contracted in the plant where the employee recently worked.

All of these are definite, practical problems regarding the etiology of occupational illness and its clinical manifestations. If we can so assemble our information that we can come to reliable conclusions and make these available, industrial medicine

*continued on next page*

and industrial hygiene will have performed a signal social and scientific service.

Clearly, the rational basis for intelligent underwriting and compensation for occupational illness lies in obtaining over a long period of years adequate and continued records of industrial exposures and observance of their effects in producing diseases and disability. Similarly, prevention depends upon the same kind of factual data. Although this may take considerable time, effort, patience, and money, it will be eminently worth while.

### *Evolution of Control Measures*

It is my belief that we are in an evolutionary period regarding occupational diseases. If we look back on our experience with fires, we find a prototype of this evolutionary process. In the beginning, there was no fire insurance and great losses were suffered. Eventually a system was provided by which one could insure against fire and the resulting losses. People discovered that in many instances it was not possible to recover the total loss suffered. After years of this experience, someone developed the idea that fire prevention was less costly than expecting to recover losses through insurance, although it was advisable both to carry insurance coverage and prevent fires. Today we have developed many methods for the prevention of fire, as well as having improved in our ways of fighting fires.

We can draw a similar analogy between the evolutionary processes of occupational diseases and those of accidental injuries. Time was (and probably still is, in some quarters) when those in authority believed that the effects of accidental occupational injuries may be fully covered by insurance. This conception has gradually given way to the principle of accident prevention, which, while not fully developed and applied in every industrial organization, has gone a long way.

We shall probably have to learn the same lessons in occupational disease prevention, as have previously been taught to us and applied regarding fires and accidental injuries. To repeat, prevention is by far the most economical procedure, viewed from any angle.

### *Conclusions and Recommendations*

We may conclude that there is great need for more extensive use of the principles of coordination and integration in associating information and coming to more reliable conclusions regarding the causes and effects of occupational disease; which information can be intelligently applied in prevention and control measures in the practice of industrial hygiene and industrial medicine.

Such action would involve the training and employment of greater numbers of those whom we have been pleased to call "qualified interpreters" and perhaps a combination of the following: (1) use of consultants and advisers by employers in working out their problems of occupational illness prevention and control; (2) adaptation of trained personnel to the work of insurance companies, in respect to industrial investigations, claims problems, and the underwriting of future risks; (3) the development of more scientific medicolegal principles in the handling of legal and compensation cases; (4) the further and continued enlightenment and training of engineers, physicians, insurance company representatives, attorneys, industrialists, industrial commissions, and their associates, through periodic conferences, meetings, and lectures.

Apropos of this last suggestion concerning continuous and further enlightenment and training, are the words of Henry Thomas Buckle:

> "For the great enemy of knowledge is not error, but inertness. All that we want is discussion and then we are sure to do well no matter what our blunders may be. One error conflicts with another, each destroys its opponent, and truth is evolved. This is the course of the human mind, and it is from this point of view that the authors of new ideas, the proposers of new contrivances, and the originators of new heresies, are the benefactors of their species. Whether they are right or wrong is the least part of the question. They tend to excite the mind; they open up new faculties; they stimulate us to fresh inquiry; they place old subjects under new aspects; they disturb the public sloth; and they interrupt rudely, but with most salutary effects, that love of routine which, by inducing men to go groveling on in the ways of their ancestors, stands in the path of every improvement, as a constant, and outlying, and too often, a fatal obstacle."

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**BY-LAW AMENDMENT**

**At the May meeting of the House of Delegates the following section of the By-Laws (Article VII, Section 2) titled "Composition" of the Council, was amended to read as follows:**

**"The Council shall consist of the Councillors elected by the component societies, the five most recent living past presidents of the Society, the President, the President-Elect, the Vice President, the Secretary, the Assistant Secretary, the Treasurer, and the Assistant Treasurer.**

**"An elected alternate Councillor may serve in the absence of the Councillor or past president from his Component Society."**

SMOKE AND HEALTH

*continued from page 500*

the ocean and its fogs should greatly accentuate pollution ills in Providence, especially on low pressure days when flue products hang low in the city air. On high pressure days, there is much better sedimentation of the atmospheric dirt and brisk winds bring in a supply of clean air. With her extensive railroad yards and industrial plants concentrated in the heart of the city, Providence should show areas of sharp health damage.

In any serious effort to achieve relief, the first step should be the organization of a militant committee or group dedicated to smoke clearance. This group should include the most forward-looking members of the community. The first act of the group should be to make possible a detailed study of the local smoke and respiratory disease situation, in order to provide an unquestioned health basis for later action. Next should come the drafting of adequate statutes so that enforcement can be on a legal basis. Highly technical points must be considered in enforcement regulations, and those responsible should familiarize themselves with the St. Louis ordinance which is really accomplishing remarkable results. Passage of the proper ordinance then provides the smoke clearance group with its opportunity to see that enforcement is effective and sustained through the years.

*Summary*

There exists a highly significant relationship between atmospheric pollution (sootfall) and respiratory disease death rates in the various districts of Cincinnati and Pittsburgh.

This hazard involves particularly the men living and working in the badly polluted industrialized districts of the two cities. Even the females of these districts show much more respiratory disease than is found in the hilltop suburbs, but the male rates rise 2 to 3 times more than the female.

Little difference between male and female rates exists in the suburban areas of these two cities or among rural residents of Ohio.

Exhaust steam from power sources adds greatly to the winter smoke problem by remaining as a fog to hold the flue products suspended in the air the people must breathe.

Remedial steps should include: (a) use of low-volatile coal or proper equipment to burn high-volatile varieties smokelessly; (b) effective trapping of fly-ash in chimney or stack; (c) preliminary washing of high-sulphur coals; and (d) use by the railroads of Diesel or electric power within metropolitan limits.

**REFERENCES**

[1]Ascher, L. Der Einfluss des Rauchs auf die Atmungsorgane. Stuttgart, 1905; also Die Einwirkungen von Rauch und Russ auf die menschliche Gesundheit. Deutsch. med. Wochenschr., 1907, *35* (Part I) :585-6.

[2]White, W. C. and Marcy, C. H. A study of the influence of varying densities of city smoke on the mortality from pneumonia and tuberculosis. Trans. 15th Internat. Cong. Hyg. and Demog., 1931, *III*: 1020-7.

[3]Haythorn, S. R. and Meller, H. B. Necropsy evidences on the relation of smoky atmospheres to pneumonia. Am. Jour. Pub. Health, 1938, *28*:479-486.

[4]Benjamin, J. E., Ruegsegger, J. W. and Senior, F. A. The influence of overcrowding on the incidence of pneumonia. Ohio State Med. Jour., 1940, *36*:1265-1281.

[5]Bloch, B. and Widmer, R. E. Weitere Untersuchungen uber die bei der kunstlichen Krebserzeugung wirksamen Teerbestandteile. Arch. f. Dermat. u. Syph., 1926, *152*: 529.

[6]Benner, R. X. How and why smoke is injurious. Trans. 15th Internat. Cong. Hyg. and Demog., 1912, *III*:1015-19.

[7]Oughterson, A. W. Discussion of "A program for the study of cancer of the stomach" by Carl Voeghtlin, Jr. Nat. Cancer Inst., 1941, *I*:547.

## SMOKE POLLUTION IN PROVIDENCE

May 23, 1945

Dear Dr. Clarke:

In accordance with our agreement I am transmitting to you the results of the soot collection and analysis for the month of April 1945.

The analysis shows that today's conditions are probably comparable with and maybe slightly worse than conditions previous to our tests and analysis which started in 1930. But the results are not surprising, as the industry in this section—normally burning oil—was forced to convert to soft coal. Of course this is definitely a war condition, and will correct itself after the war.

The Biltmore Hotel roof sample should be somewhat disregarded because the Hotel is now burning soft coal and its chimney was too close to the test jar. However, this sample does give an indication that the increase of smoke pollution in this area might be proportionately high. The sample taken from the Brown University area reflects the effects of a southwest wind—a frequent condition in this area.

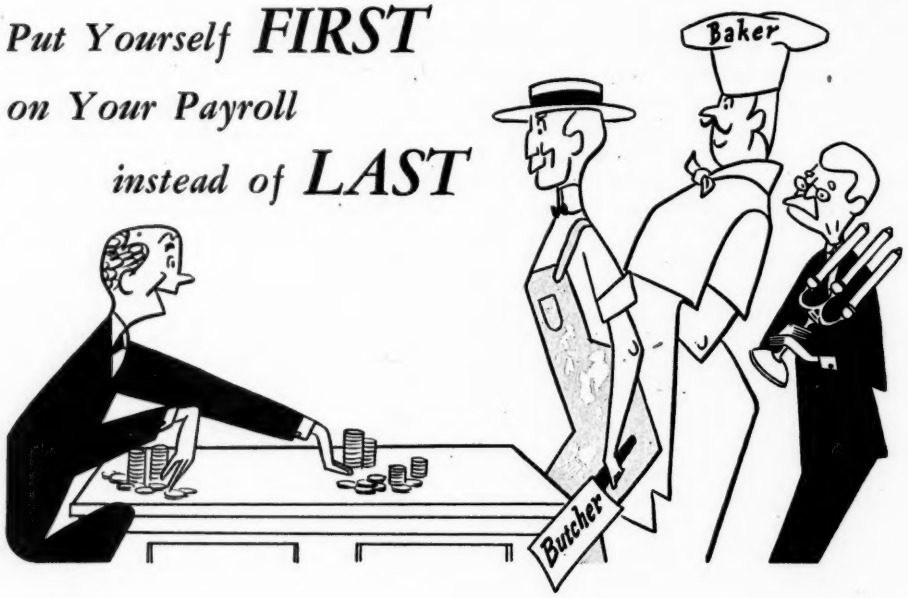
Yours very truly,
PHILIP S. MANCINI,
*Public Service Engineer*

PSM:EFM
Enclosure

**SOOT FALL IN PROVIDENCE**
***Tons per Square Mile per Year***

| Location | April 1930 | Average 1930-38 | April 1945 |
|---|---|---|---|
| Biltmore Roof | 2875 | 855 | 5647 |
| Sessions St. Police Station | 379 | 252 | 497 |
| Roger Wm. Park Casino | 330 | 270 | 305 |
| Brown Univ. Engineering Bldg. | 667 | 305 | 1467 |
| School for Deaf | 1213 | 410 | 336 |
| Central High School | 862 | 440 | 756 |

*Put Yourself* **FIRST**
*on Your Payroll*
*instead of* **LAST**




## How to Have Income for the Rest of Your Life

When you sit down to take care of your monthly bills, the butcher, the baker, the candlestick maker, each gets what's coming to him — but are you equally careful about setting aside something for yourself and your family?
Too many of us devote our income to meeting present and past expenses, and save only if there's something left over.

But why put yourself last on the list? Make a definite program for the future a regular part of your budget.

Read about The Connecticut Mutual's Retirement Income plan which enables you to enjoy real peace of mind. Let us send you a copy of our booklet, "What Is the Retirement Income Plan?"

*The* Connecticut Mutual Life Insurance Company

Walter K. R. Holm, Jr., *General Agent*
and Associates
*Suite 1814, Industrial Trust Building, Providence 3, R. I.*

*Please send me a copy of your booklet "What Is the Retirement Income Plan?"*

NAME ..... DATE OF BIRTH .....

ADDRESS .....

CITY ..... STATE .....

# INVENTORIES*

WILLIAM SLEIGHT, *Assistant Director, Homeopathic Hospital, Providence*

I SHALL endeavor to make this paper on the subject of Inventories as short and as practicable as possible.

The function of Inventories is to control the expenditure of a considerable portion of the hospital's funds, and if properly set up and used, should be an invaluable aid to the efficiency of the purchasing agent of the hospital.

There are certain major objectives to be accomplished by maintaining Inventories. First, that there shall be adequate supplies for all occasions so that service need never be interrupted because of the lack of materials; second, that these supplies shall be so cared for that there shall be no wastage through damage, oversight, or needless handling; third, that the system be so arranged, and storage space allowed for the purchase of supplies in economic quantities, thus reducing the cost per unit, and the time and labor connected with the frequent need to replenish stock and fourth, the accurate distribution of departmental charges for supplies issued during a designated period.

### *Methods of Keeping Inventories*

Two general methods are employed. Under the first, the old method of keeping a record of purchases and taking a physical inventory periodically to determine how much material must have been used is deemed sufficient.

In a small factory making just one product—or a few simple products—where the conditions are such that the manager has an intimate knowledge of all processes and can exercise personal control over them, fairly satisfactory results may be obtained under this method though the amount and the cost of material used can never be known accurately until the inventory has been taken.

Even in a small hospital of today this method could only be used by having one supply account for the entire hospital or by setting up specialized inventory and supply accounts for each department. This would not be practical for many of the individual items are used by all or most departments of the hospital. There is one exception to this and that is the Pharmacy. This is one department with its large number of items wherein this method might be satisfactory. However, if this method is used for the pharmacy of a large hospital, proper procedures would have to be set up to account for the various pharmaceuticals used in other specialized departments such as X-Ray, Laboratory, the various Out-Patient Clinics, etc.

The second method requires almost as accurate accounting for material as for cash. A stores department must be established and a stores ledger installed. As materials are purchased and come into stores they are classified in whatever detail is desirable and charged to their respective class or control accounts in the general ledger. As supplies are needed they are drawn by properly authorized order on the stores-keeper. These orders are called requisitions and indicate the items needed and the department to be charged. The requisitions also constitute the source of the credit entries to the various stores ledger accounts. The balances on the stores ledger accounts thus show the amount of each class of material which should be on hand in the stores room.

This method is known as the perpetual inventory system. By its use, it is possible to know without taking a physical inventory how much material is being used and the cost of it. By its use, minimum and maximum amounts of the individual items may be established thereby greatly increasing the control over materials on hand and aiding in the proper and timely purchasing of items having reached the minimum.

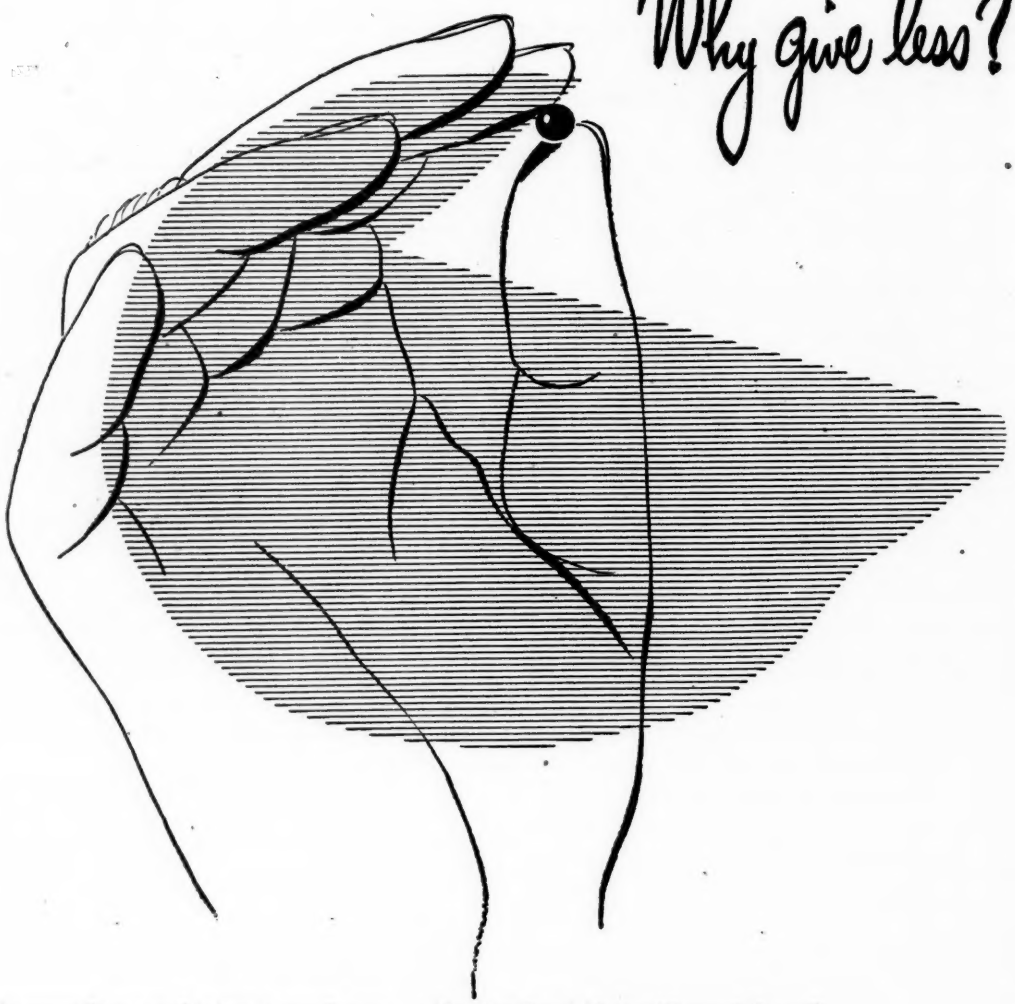
### *Installing the Perpetual Inventory System*

First, we must determine the items which are to be included in stores. These must be listed and classified, first, into the stores accounts you are to use in the general ledger. At the Homeopathic Hospital we use three general classifications as follows: General Stores, Cotton Stores, and Grocery Stores. Some hospitals may wish to set up a classification of Maintenance Supplies. These general classifications must then be subdivided for use in your stores ledger. Typical classifications under General Stores might be, Printed Forms, Glassware, Enamelware, Rubber Goods, etc., under Cotton Stores, might be Dressings, Piece Goods, Uniforms, etc. Grocery Stores we do not subdivide for we carry only such items in this account which

*continued on page 513*

*Presented at the semi-annual meeting of the Hospital Association of Rhode Island, at Providence, June 21, 1945.

# Why give less?



In prescribing a multivitamin supplement for prophylaxis, as in pregnancy, or for maintenance when patients suffer a mild degree of nutritive failure, you naturally will desire to specify *no less* than the recommended daily allowances of the Food and Nutrition Board, National Research Council.

Squibb Special Vitamin Formula provides you with these full allowances in a *single* capsule. With Squibb Special Formula you have a preparation that may be administered routinely under *your* direction.

***each capsule supplies:***

| | | | |
|---|---|---|---|
| Vitamin A | 5000 units | Riboflavin | 3 mg. |
| Vitamin D | 800 units | Niacin | 20 mg. |
| Thiamine | 2 mg. | Ascorbic Acid | 75 mg. |

*Write for new informative brochure: "Nutritive Therapy." Address Professional Service Dept., 745 Fifth Avenue, New York 22, N. Y.*

**SQUIBB Special Vitamin Formula**

MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

## INVENTORIES

*continued from page 511*

will not deteriorate or spoil when kept in stock for a reasonable length of time. The account is used chiefly for canned goods. These subdivisions must then be given an identification symbol either alphabetical or numerical.

Under each subdivision must be listed the individual items to be maintained in stores under that classification. These individual items should be listed alphabetically according to the name of the article, using the standard name, and after the listing is complete give each item an identification number prefixed by its subdivision identification number or letter. In giving the individual items identification numbers, I would advise that you leave certain numbers unassigned, to take care of the addition of new items, new sizes of the same item, etc.

These complete listings will be the basis on which you will prepare your catalogue of supplies in stores. I feel that it is necessary to have a Catalogue to be given to each department so that in requisitioning items from stores, the correct identification number and name will be used. Simple instructions as to its use and the procedure for requisitioning stores should be included as a preface to your catalogue. Opposite each item in your catalogue, designate the appropriate quantity, package, box, etc., which you wish to be used as the withdrawal unit.

The next step is to set up your stores ledger cards for the individual items, arranging them in the same classification and identification numbers as your catalogue. There are many standard forms of ledger cards which you may purchase, or you may design one suitable to your own needs. I feel that provision for the following information is necessary on the stores ledger card: Date, Quantity received, Purchased from, Quantity issued, Invoice Price and unit cost, and balance on hand.

These stores ledger cards should then be set up in visible index form, either in drawer units or ring book form. The stores ledger may be operated either in the stores room or accounting office. In the larger institutions with sufficient storeroom personnel, a clerk is employed and the ledger kept there. In a smaller institution, it would be part of the accounting office procedure.

The next step should be segregation and classification of the stores items themselves. They should be classified into the same subdivisions as your catalogue, numbered and arranged in bins or on shelves in the storeroom as nearly in the same order as the catalogue as is possible. Of course, it is not possible to do this with every item, for instance large bulky items may not fit very well into your bin or shelf arrangement. Special storage space must be provided for such items. This arrangement should be done before the physical count is made, as it will greatly facilitate the taking of the count and entering of the items on the ledger cards later.

The physical count is then made and the items priced and extended. Totals are arrived at and the proper entries made to the respective stores control accounts in the general ledger. The individual items should be entered in the balance column of the stores ledger card, together with the unit cost and as much information as to source of supply, etc., as is possible to obtain. In pricing of inventories, it is the custom of most industrial and commercial concerns to use cost or market whichever is lower. For practical purposes in setting up a new inventory for a hospital I feel that the last invoice price would be fair, unless the goods on hand represent a number of purchases at varied prices, then I believe the average price of the purchases would be better, if such information is readily available.

*continued on page 523*

## A SIN OF OMISSION

It isn't the Charts you do, Doctor
  It's the Charts you leave undone,
That give us a bit of heartache
  At the setting of the sun.

The History Sheet forgotten,
  Physicals you did not write,
The Notes you might have written
  Are your haunting ghosts tonight.

The Charts you might have gotten
  From the Record Office's way,
The little Consultation Note
  You did not write today.

The Operative Record
  Not on the Dictaphone,
That you had not time nor thought for
  With troubles of your own.

They come in the night in silence,
  Each still, reproachful wraith,
When hope is faint and flagging
  And a blight has dropped on faith.

It isn't the Charts you do, Doctor
  It's the Charts you leave undone
That give us a bit of heartache
  At the setting of the sun.

MARY S. CHEEVER,
*Medical Secretary*
St. Joseph's Hospital
Providence, Rhode Island

*Original Poem "A Sin of Omission" by Ella Wheeler Wilcox.*

The effectiveness of *Syntropan 'Roche' in the treatment of spastic colitis has been demonstrated by Weston (*Rev. Gastroenterol.*, 1942, 9:285). In a series of patients, some of whom had had symptomatic distress for as long as seven years, many experienced complete relief of symptoms following Syntropan therapy. The action of Syntropan 'Roche,' a non-narcotic antispasmodic, has been found superior to that of belladonna and its derivatives in the treatment of disorders due to smooth muscle spasm. Most important is the fact that Syntropan affords more direct antispasmodic effect with less likelihood of mouth dryness, mydriasis, or tachycardia.

HOFFMANN-LA ROCHE, INC.
ROCHE PARK, NUTLEY, N. J.

"FIGHT INFANTILE PARALYSIS • JANUARY 14th—31st"

SYNTROPAN 'ROCHE'

# DOCTORS AT WAR

## "PEOPLE BACK HOME SHOULD KNOW THESE THINGS"

*(In this month in which we celebrate the independence of our own great country we may well be mindful of the great contribution of our armed forces in restoring freedom to the oppressed peoples of Europe. The following letter from Captain Edward Ricci, MC, of North Providence, is a significant report of the breaking of the bonds of slavery imposed by the Nazi rulers. — The Editors.)*

Easter Sunday, 1945

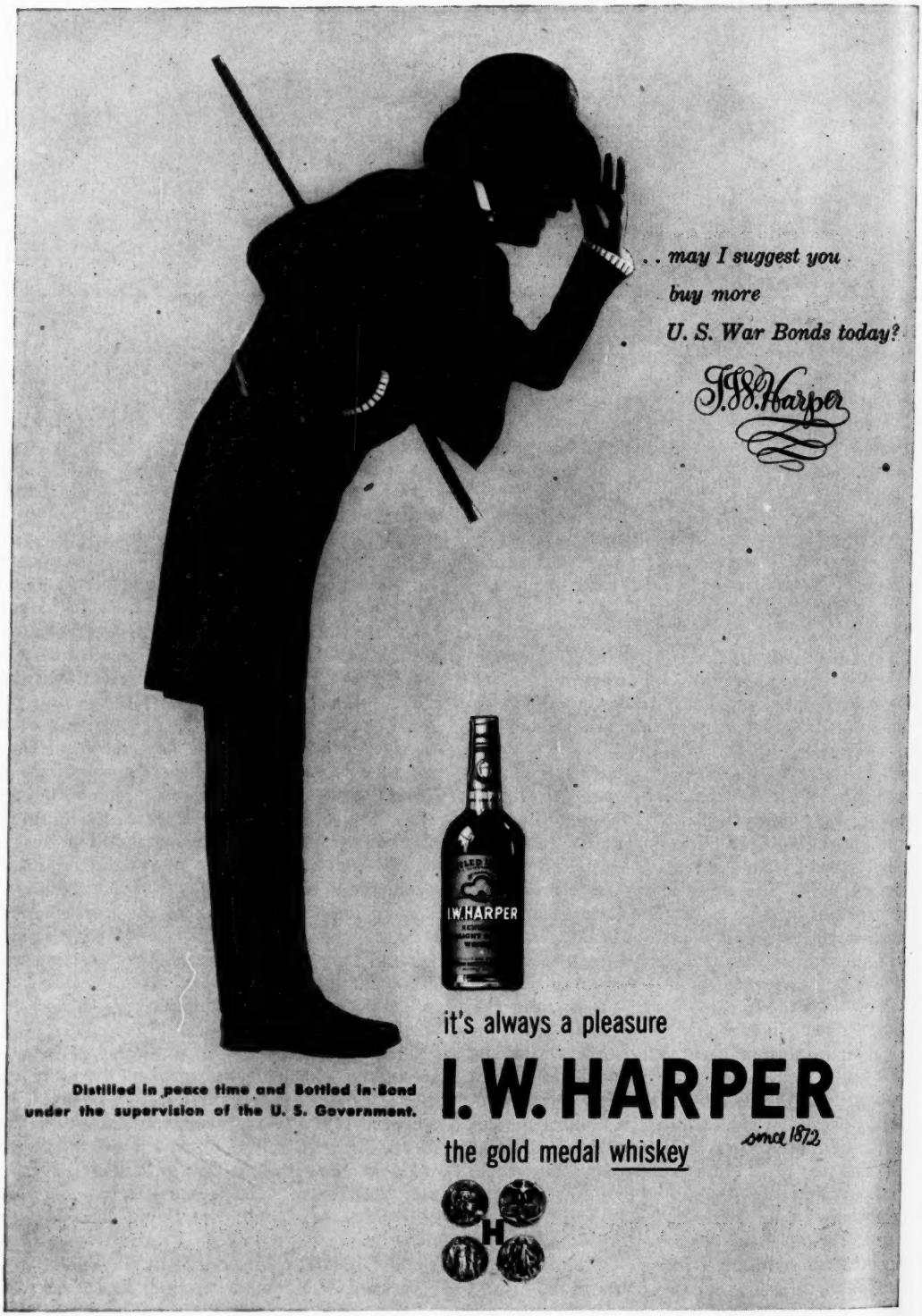
HERE it is April and perhaps by the time you read this letter, some real good and perhaps startling news will be out. Today is Easter. We go to church at 7:30 tonight, only time available. They say today — I think "The Lord has Risen" — well, it is very appropriate with what I saw only an hour ago. It is by far the most pathetic and heart-stirring sight which has definitely proven to me the cruelties of the Nazis and Germans alike. Just three minutes walk from our tents is what was a small German park. There is a large barn there which perhaps was the playhouse. The entire area is perhaps no larger than a couple of acres. Into this area, the only one available because of the ravages of war, are quartered some 1000 former slave laborers, mostly Russians, Poles, Czecks and also some French, Italians and few others. There are some of the younger men and women who do not look too bad, but in many there is no doubt signs of malnutrition and tuberculosis. The expression of "being packed in like sardines" is not exaggerated here; there are no conveniences. Wash at times, eat what they can and when they can. However the U. S. Army is rapidly coming to their aid, otherwise there would surely be an epidemic of some form. Tobacco Road or Grapes of Wrath episodes are heavenly compared to this.

This morning I spent two hours in the area. I took some pictures and spoke to many French and Italians. The French boy with scars, evidence of being whipped during his work, told me that if the Nazis thought they were not working hard enough they would make use of the whip. Another informed me that another method was this: Some workers sitting at a bench would have one wrist handcuffed to which was attached a moderate current of electricity, so constructed that it did not interfere with their work. This would enable one supervisor to handle many men. As he looked about from atop his high chair and observed anyone not working fast enough, he would turn the electricity on. This served even better than the whip. Others told of many other forms of atrocities. For example, meals at their best "were not fit for pigs" as one described it, however if the German thought that the slaves were not putting out enough work, they were forced to go without a meal. The laborers were not on many occasions allowed to enter air raid shelters in Berlin during the raids but were forced to continue their work. Another individual with anger in his face described how an American aviator, shot while parachuting, came to rest on a treetop. The Germans pulled him down by the use of long rods. The American was still breathing; nevertheless, after removing all valuables they proceeded to push him in a ditch for burial.

These people were seldom allowed periods of recreation, seldom able to wash and therefore disease and death among them was common. I inquired as to the reason there were no Jews among them. Their answer was that the Nazis didn't consider the Jews good enough to be their slaves, so they killed them. The female element comprised only Russians, Czechs and Poles. They did not make slaves of Italian or French women; they could, however, volunteer. I saw not a one!

In spite of all, this warm, windy Easter day when "The Lord Has Risen" the news is extremely en-

*continued on page 521*


. . may I suggest you
buy more
U. S. War Bonds today?
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I.W. HARPER
Distilled in peace time and Bottled in Bond under the supervision of the U. S. Government.
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I. W. HARPER
since 1872
the gold medal whiskey
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Kentucky Straight Bourbon Whiskey, Bottled in Bond, 100 Proof, Bernheim Distilling Co., Inc., Louisville, Kentucky.

DOCTORS AT WAR

*continued from page 519*

couraging, and these same people, in spite of the filth and discomforts, are now Free. They are continually smiling, happy for the first time in years, looking forward with extreme anxiety to the day they may return to their broken homes and families, all with one desire that the German is destroyed forever. Well, I tried to make it vivid enough but unfortunately I do not possess that quality in being able to write as I would wish and as it should be, because, if anything, I have underestimated everything. One must see it to really be impressed. It is incredible. Many civilians had previously told me in France, Belgium and England that we Americans can never imagine the atrocities committed by the Nazis. I did not believe it all then, but now I have seen with my own eyes and I have heard so many stories of similar themes that even if I were to divide them by fifty, the atrocities would still be many. One could not imagine that a modern civilized nation could stoop that low.

I hope you allow Paul and Joe to read this, as I won't have time to describe it to them. In fact you have my permission to have it printed if you care to sometime. People back home should know these things.


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*Effective*

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THE effectiveness of Mercurochrome has been demonstrated by more than twenty years of extensive clinical use. For professional convenience Mercurochrome is supplied in four forms—Aqueous Solution in Applicator Bottles for the treatment of minor wounds, Surgical Solution for preoperative skin disinfection, Tablets and Powder from which solutions of any desired concentration may readily be prepared.

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(H. W. & D. brand of merbromin, dibromoxymercurifluorescein-sodium)

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Mercurochrome is antiseptic and relatively non-irritating and non-toxic in wounds.

Complete literature will be furnished on request.

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# When Weight Gains

## ARE NEEDED

For the underweight patient just recovered from severe acute or chronic illness, increase in weight may be difficult to achieve with the customary high-caloric diet. Yet restoration of normal fat deposits and correction of nutritional deficiencies are essential for rapid return of strength and resistance to infection.

The intake of essential nutrients high in calorific value is expeditiously accomplished by including Ovaltine in the diet. This tasty food drink, made with milk as directed, is enjoyed by all patients both as a mealtime beverage and between meals. Not only rich in calories, it also provides generously other nutrients urgently required: biologically adequate proteins, highly emulsified fat, B complex and other vitamins, as well as the essential minerals iron, copper, calcium, and phosphorus. The low curd tension of Ovaltine favors quicker gastric emptying, hence the appetite actually tends to become enhanced through this desirable behavior.

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Ovaltine

Three daily servings of Ovaltine, each made of ½ oz. Ovaltine and 8 oz. of whole milk,* provide:

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| PROTEIN | 31.2 Gm. | VITAMIN A | 2953 I.U. |
| CARBOHYDRATE | 62.43 Gm. | VITAMIN D | 480 I.U. |
| FAT | 29.34 Gm. | THIAMINE | 1.296 mg. |
| CALCIUM | 1.104 Gm. | RIBOFLAVIN | 1.278 mg. |
| PHOSPHORUS | .903 Gm. | NIACIN | 7.0 mg. |
| IRON | 11.94 mg. | COPPER | .5 mg. |

*Based on average reported values for milk.

INVENTORIES

*continued from page 513*

The above procedures having been completed there now remains the establishment of procedure for requisitioning of supplies from stores and accounting procedure for distribution of the cost of supplies to the various departments. Your requisition should provide for the following information: Department, Date, Units Wanted, Catalogue Number, Name of Supply, Unit Price and Total Cost, a place for signature of person receiving supplies, and a place for the administrative approval. It is my opinion that requisition should be prepared in duplicate; both being signed by the person receiving the supplies. The original being returned to the stores ledger clerk for pricing and distribution and the duplicate being retained by the department receiving the supplies. The original is priced by the stores ledger clerk and entered on the ledger card daily. Thus, by referring to the stores ledger card, you know the quantity on hand in stores at any time.

Entering the unit costs of materials issued on the requisitions may be done by two methods. One by the "first infirst out" method. For instance, if after your original inventory is set up, you receive a new shipment of an item at a different price you would cost your requisition at the old price until all the old stock had been issued, then you would cost additional issues at the new price. Method number two is the average cost method, by this method when a new shipment is received, you calculate the total cost of the item on hand at the old unit price, add the new invoice cost and divide the total obtained by the new total quantity on hand, including the new shipment. This will give you the new average price to be used in costing your requisitions. I advocate this average cost method as it eliminates the confusion of having two prices for the same article, and also results in a more accurate present day cost.

I would suggest that you use separate requisitions for each general ledger classification of stores accounts such as General Stores, Cotton Stores, etc., as this will enable you to segregate your requisitions and you will then avoid the confusing detail of picking out each item on the requisition for classification.

Departmental costs may be distributed by entering the requisitions on a work sheet daily or by accumulating them by departments until the end of each accounting period. Personally, I like the daily distribution for then you may prove your departmental distribution with your total requisitions every day.

Your distribution of departmental costs for supplies issued, to the general books then resolves itself into one entry at the end of each month or accounting period, charging the department and crediting the proper classification of stores inventory account as indicated by your work sheet.

This perpetual inventory method eliminates the necessity of taking a complete physical inventory more than once or twice a year. However, frequent checks should be made from time to time by the storeroom personnel to see that the physical count agrees with balance on the stores ledger card. For instance, they might take one or two subdivision classification each week or month as is felt necessary. This eliminates the possibility of large discrepancies going undiscovered for a long period of time.

I feel that it would be well to arrange a schedule of delivery days each week for the various departments, this eliminates the possibility of every department wanting their supplies on the same day, provides for a more orderly distribution of work in your storeroom, and reduces the possibility of any department overloading supplies on hand. Of course, provision must be made for issuing supplies urgently needed, but such extra calls for delivery of supplies should be checked carefully before being approved.

### *Determination of Quantities to Be Carried in Inventories*

There are many factors to be considered in determining the quantities to be carried in stock. First, the financial resources of the hospital. If there is cash available, the purchasing agent or superintendent, should be allowed to purchase in economic quantities. Transportation and communications, together with the location of the hospital, play a large part in determining how much shall be stored. In these days of war shortages and overloaded transportation facilities, there is no question but that oversize inventories must be carried wherever possible. It may be well to consider the possibilities of inflation after this War, as current events, market conditions and economic trends will inevitably affect the size of inventory and must all be watched. However, the danger of spoilage, breakage, depreciation, the loss of interest on the money invested and the value of the space required must all be considered and weighed carefully to complete the picture of economic values desired.

Only by centralizing the control of inventories and stockroom can this end be accomplished and such control should be in the hands of the purchasing agent.

Buy War Bonds

FULL-FLEDGED COOPERATION

MAXIMUM patient cooperation in intestinal bulk therapy is assured by Mucilose, a highly purified hemicellulose which provides *greater bulk* from *smaller doses* at *lower cost*. Published data* show that Mucilose yields much more bulk than other well-known psyllium-base products. Doses are correspondingly smaller, and savings in cost to the patient average 65%.

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**SUPPLIED** in 4-oz. bottles and 16-oz. containers. Also available as Mucilose Granules, a dosage form preferred by some

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**FACTS ABOUT MUCILOSE**

**MUCILOSE** is a hydrophilic vegetable colloid composed of the highly purified hemicellulose of Plantago loeflingii.

**LUBRICATING BULK** is provided for gentle stimulation of intestinal peristalsis because approximately 50 parts of water are absorbed to produce a colloidal gel.

**BLAND**, hypoallergenic, and free from irritants, it is also non-digestible, non-absorbable, and chemically inert in the digestive tract.

**INDICATED** in the treatment of both spastic and atonic constipation, and as an adjunct to dietary measures for the control of constipation in aged, convalescent and pregnant patients.

**DOSAGE**: 1 or 2 teaspoonfuls in a glass of water, milk, or fruit juice once or twice daily, followed immediately by another glass of liquid. It may also be placed on the tongue and washed down, or it may be eaten with other foods such as cereals. Ample fluid intake is advisable to assure maximum bulk formation.

*Gray, H and Tainter, M L.; *Am. J Digest Dis.* 8:130, 1941

TRADE MARK MUCILOSE—REG. U.S. PAT. OFF.

# DISTRICT SOCIETY MEETINGS

## PAWTUCKET MEDICAL ASSOCIATION JUBILEE

THE fiftieth anniversary of the founding of the Pawtucket Medical Society was celebrated at the Pawtucket Golf Club on June 6, 1945. The afternoon was spent in golfing and other sports. At 7 p. m. a dinner was served to the members and their guests. After dinner Dr. William N. Kalcounos, President of the Society, read the history of the organization and its founding as it was recalled by Dr. Charles F. Sweet, one of the charter members, who was unable to attend. The history reads as follows:

"Charles F. Sweet, M.D., graduated from the Medical School of Harvard University, June 27, 1894.

"In September, 1894, Dr. L. W. Clapp, a prominent physician of Pawtucket, met with an accident in the back yard of his home at 24 Park Place, whereby he rolled down a steep enbankment, dropped off a stone wall, and fell twenty feet. He landed on a concrete walk below and was dead when help arrived. Dr. Sweet began the practice of medicine in the office of Dr. Clapp on October 1, 1894.

"Before Dr. Clapp's death there was an organization of eight physicians who formed a book club for the purpose of circulating medical magazines among its members. When Dr. Clapp died there was a vacancy in the membership. Three Pawtucket physicians applied to fill this vacancy, and Dr. James H. Kingman was elected. The other two applicants, Dr. Sweet and Dr. Francis M. Harrington, decided that another book club could be organized, and after approaching six other physicians concerning the project, a new club was formed. It was decided that besides circulating magazines the club would meet monthly at the office of one of the members; that member would read a paper on a subject of interest to the profession, and light refreshments would be furnished.

"The first two or three meetings were held in Dr. Sweet's office and the club adopted the name of Medical Science Club. At a meeting held in December, 1894, Dr. Julian A. Chase and Dr. Charles A. Stearns were invited to attend. The subject of a medical society for Pawtucket and vicinity was favorably discussed. The next day Doctors Sweet and Harrington sent out postal cards to the physicians practicing in Pawtucket and vicinity, inviting them to attend a meeting at Dr. Stearn's office on North Union Street. The attendance was encouraging and those present were in favor of forming a society. Committees were appointed and other meetings were held.

"In March, 1895, the election of officers was held. Dr. Julian A. Stearns was elected President, Dr. Frank B. Fuller, vice president, Dr. Charles A. Stearns, treasurer, and Dr. Francis M. Harrington, secretary. The name adopted was The Pawtucket Medical Association. The meetings were held at the To Kalon Club in the Pitcher estate next to Trinity Church on Main Street, on the land now occupied by the present club. The meetings were held there until the building was gutted by fire. The To Kalon Club then leased the Olney Arnold estate at the corner of Broad and Miller Streets (the present Slater Hotel) and medical meetings were held there until the completion of the new To Kalon Club.

"At one time the Association met at the Benedict House (corner of Main and Broad). Later meetings were held at the Pawtucket Golf Club and at the auditorium of the Memorial Hospital.

"Dr. Charles F. Sweet is the only surviving member of the Founders of the Pawtucket Medical Association. Dr. James L. Wheaton, who joined the association in 1895, is almost a charter member, and is still in practice."

After the reading of the above history, Dr. John F. Kenney, President of the Rhode Island Medical Society, was called upon. He recalled his years of association with the society and its members, and he presented a scroll to Dr. James L. Wheaton in honor of his fifty years' association with the society. The scroll for Dr. Sweet was to be presented to him at his home. Various members, including Dr. Henry B. Moor, chief of the surgical service of the Memorial Hospital, were then called upon.

Prizes for the contests of the afternoon were then awarded to the members by the president. Dr. Adrien Tetreault received the grand prize of the day for winning the golf tournament.

The remainder of the evening was devoted to entertainment by a professional group. The meeting was then adjourned.

Respectfully submitted,
MARY-ELAINE J. ROHR, M.D.,
*Secretary*

NOTCHED
The Margin of Safety
In steel and concrete building construction, the architects invariably plan for a generous factor of safety to withstand stresses and strains far beyond the rated normal load.

THE SUPER POTENCY OF VI-TEENS, multi-vitamin tablets, gives an ample margin of safety well above the minimum adult requirements.

Two Super Potency Vi-teens tablets daily, provide the following:

| | |
|---|---|
| Vitamin B₁ (Thiamine HCL) (2666 U.S.P. Units) | 8 Milligrams |
| Vitamin B₂ (G) (Riboflavin) | 4 Milligrams |
| Niacinamide (Nicotinamide) | 30 Milligrams |
| Pyridoxine ($B_6$) | 2 Milligrams |
| Vitamin C (1500 U.S.P. Units) | 75 Milligrams |
| Vitamin A | 5000 U.S.P. Units |
| Vitamin D | 1000 U.S.P. Units |

Vi-teens Super Potency vitamin tablets are especially recommended in cases of avitaminosis where an unusually high dosage of additional multiple vitamin intake, particularly with reference to thiamin, riboflavin, and pyridoxine, is indicated. Regular size package on request.

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# ANNUAL REPORTS . . . 1944

## *Rhode Island Medical Society*

### ANNUAL REPORT OF THE TREASURER

***Receipts***

| | |
|---|---|
| Cash on Hand January 1, 1944 | $ 4,888.48 |
| Outstanding checks | 241.10 |
| | 4,647.38 |
| Annual Dues | 11,970.00 |
| Donations | 2,457.27 |
| Harris Fund | 1,043.95 |
| Terry Fund | 48.00 |
| Davenport Fund | 44.50 |
| Ely Fund | 496.50 |
| Morgan Fund | 21.50 |
| Endowment Fund interest transferred to Peoples Savings Bank | 85.00 |
| Exhibits, Annual Meeting, Donations | 1,455.00 |
| | 22,269.10 |
| Outstanding checks | 42.40 |
| | $22,311.50 |

***Expenses***

| | |
|---|---|
| Printing and Postage | $ 363.49 |
| Gas | 46.54 |
| Electricity | 85.60 |
| Fuel | 680.07 |
| Telephone | 204.60 |
| City Water | 19.08 |
| House supplies and expenses | 522.22 |
| House repairs | 253.35 |
| Salaries | 9,903.60 |
| Journals, Ely and Terry Funds | 87.54 |
| Safe Deposit | 7.20 |
| Treasurer's Bond | 25.00 |
| Delegate, American Medical Association | 100.00 |
| Expenses, Meetings and Committees | 342.45 |
| Endowment Fund interest transferred to Peoples Savings Bank | 85.00 |
| Expenses of Exhibits | 578.70 |
| Collector of Internal Revenue | 784.42 |
| Harris Fund, Purchase of 28 shares of Nicholson File Co. | 1,025.50 |
| | 15,114.36 |
| Cash on Hand to Balance | 7,197.14 |
| | $22,311.50 |

### SPECIAL FUNDS

***Interest and Disbursements***

January 1, 1945

#### J. W. C. ELY FUND

A memorial fund established in 1912 by the son and the granddaughter of Dr. J. W. C. Ely, in the amount of $1500, to be called the J. W. C. Ely Fund and the income from which was to be used for periodicals.

| | |
|---|---|
| 37 shares Rhode Island Public Service Co. | $ 1,071.67 |
| Mechanics Nat. Bank, Dividends in Liquidation | 422.50 |
| Interest paid to R. I. Medical Society for Journals | 74.00 |
| | $ 1,568.17 |

#### ENDOWMENT FUND

Started in 1912 when the Trustees (of the Fiske Fund) announced that they had voted to take the remuneration allowed them by the will, i. e., 2/12 of the annual income, amounting that year to $68.69, and to present this sum to the Rhode Island Medical Library to be the foundation of a "maintenance fund" for the support of the Library building.

| | |
|---|---|
| 16 shares National Bank of Commerce and Trust Co. | $ 1,200.00 |
| 74 shares Providence Gas Company | 906.50 |
| Peoples Savings Bank | 4,428.23 |
| | $ 6,534.73 |

#### E. M. HARRIS FUND

Established in 1921 by a donation of $5000 by Dr. E. M. Harris for "upkeep of the Library building".

| | |
|---|---|
| 23 shares Consolidated Edison Co., 5% | $ 2,346.88 |
| 74 shares Nicholson File Co. | 2,719.00 |
| Paid R. I. Medical Society for building repairs | 323.60 |
| | $ 5,389.48 |

#### FRANK L. DAY FUND

Established in 1927 by a donation from the estate of Dr. F. L. Day, to be utilized for the purchase of books.

| | |
|---|---|
| 3000 shares Canadian National Railway Co. | $ 2,979.75 |
| Paid for Medical Books (interest) | 68.62 |
| Industrial Trust Company | 720.77 |
| | $ 3,769.14 |

#### HERBERT TERRY FUND

Established in 1928 by a donation of $2000 from C. B. and C. H. Kenyon, in memory of Dr. Herbert Terry, for the purchase of books and periodicals and for the binding of same for the Library.

| | |
|---|---|
| 96 shares Providence Gas Company | $ 1,152.00 |
| Interest (Paid R. I. Medical Society for Journals) | 48.00 |
| | $ 1,200.00 |

#### JAMES R. MORGAN FUND

Established by a donation of $500 in 1929 to be used for current expenses.

| | |
|---|---|
| 43 shares Providence Gas Company | $ 526.75 |
| Interest (Paid R. I. Medical Society for expenses) | 21.50 |
| | $ 548.25 |

*continued on next page*

JAMES H. DAVENPORT FUND

Established in 1930 by a donation of $1,000 for the purchase of books for the Davenport Collection of non-medical books written by physicians.

| | |
|---|---|
| 89 shares Providence Gas Company | $ 1,068.00 |
| Balance on hand | 868.07 |
| | $ 1,936.07 |

CATALOGUING FUND

It was voted by the Council, in 1932, to transfer the amount left from the Clinical Conference Fund to a fund for cataloguing the Library. This, together with gifts, was deposited to establish the fund in 1933.

| | |
|---|---|
| Providence National Bank | $ 20.92 |
| | $ 20.92 |

PARTICIPATION ACCOUNT

| | |
|---|---|
| Providence Institution for Savings | $ 649.69 |
| | $ 649.69 |

## RHODE ISLAND MEDICAL JOURNAL

*Annual Report — 1944*

| | | |
|---|---|---|
| *Receipts* | | |
| Cash on hand, January 1, 1944 | $3,384.15 | |
| Check not cashed | 250.00 | |
| | | $ 3,134.15 |
| Receipts — advertising, etc. | 8,860.38 | |
| | | $ 8,860.38 |
| | | $11,994.53 |
| *Expenses* | | |
| Printing Journal | $ 7,880.61 | |
| Postage, envelopes, general expenses | 955.94 | |
| Editor | 1,000.00 | |
| | | $ 9,836.55 |
| Cash on hand to balance, January 1, 1945 | | $ 2,157.98 |
| | | $11,994.53 |

JESSE E. MOWRY, M.D., *Treasurer*

JOSEPH W. REILLY, M. D.
RUSSELL R. HUNT, M. D.
*Auditors*

## COMMITTEE ON ARRANGEMENTS

When the Office of Defense Transportation issued notice to the country at large that no meetings of 50 or more should be held in order to relieve the burden particularly on railroad transportation and hotel facilities the Rhode Island Medical Society requested a ruling regarding the holding of its Annual Meeting in its own building in Providence. In view of the fact that the geographical status of Rhode Island would permit transportation by motor from any part of the State, and in view of the fact that the meeting would be held in the Society's own building permission was granted by the National Committee on War Conventions to hold the 134th Annual Meeting on May 16 & 17, 1945.

Plans for the Annual Meeting, including the entertainment of the visiting speakers and guests of the Society were completed by the Committee on Arrangements. Because of the difficulties encountered in the holding of a dinner for a sizable group the Committee deemed it advisable to omit the Annual Anniversary Dinner again this year. However the Anniversary Chairman appointed by the President of the Society was invited to preside at the evening session of the meeting on May 16.

EDWARD F. BURKE, M.D., *Chairman*, CHARLES O. COOKE, M.D., JULIANNA R. TATUM, M.D., CHARLES PHILLIPS, M.D., CHARLES BRADLEY, M.D.

## COMMITTEE ON PUBLIC LAWS

The Committee on Public Laws carefully studied all measures involving health introduced in the General Assembly. The Committee made known its objections to several bills, including a bill to license Naturopathy, a bill to amend the practice of chiropractic, a bill to authorize only podiatrists to examine the legs and feet of school children for the purpose of guarding against outbreaks of infantile paralysis, and a bill forbidding discrimination against osteopaths and optometrists in any medical care plan for which State funds are appropriated. No answers were given to your Committee by the Assembly and yet all these acts passed at least one branch of the Assembly and one measure was passed in concurrence and signed by the Governor in spite of objections made to the Governor.

Your Committee strongly feels that the General Assembly has been indifferent to the attempts of the Rhode Island Medical Society to improve health legislation in this State. Therefore the Committee urges that the Society take very definite action in the future towards publicizing for the public generally every legislative act having health implications. It is the belief of the Committee that this public education might be carried forward with the assistance of the Executive Office whereby every important civic and community organization in the State would be regularly and promptly notified of the opinion of the Rhode Island Medical Society on each and all acts introduced in which we take an interest.

A complete report of the health legislation before the 1945 General Assembly has been prepared and is attached to this report. (See Page 547.)

WILLIAM H. FOLEY, M.D., *Chairman*, EARL F. KELLY, M.D., JOSEPH L. BELLIOTTI, M.D., ELIHU S. WING, M.D., WILLIAM P. BUFFUM, M.D.

## COMMITTEE ON PUBLICATIONS

During the past twelve months the JOURNAL of the Rhode Island Medical Society has continued to maintain its place as one of the outstanding State medical publications of the country. Your Committee feels that the membership of the Society may take justifiable pride in the excellence of the JOURNAL and the Committee takes this opportunity to express the appreciation of all the members for the splendid work of the Editorial Board, the Editor-in-chief, and the Managing Editor.

Within the year the Committee has approved of the re-organization of the Editorial staff to bring new additions to the task of editing the JOURNAL. The Committee has also met with the staff and the management to work out some of the problems entailed in the publishing of such a sizable monthly publication.

Within the year the circulation has risen to close to 1500 monthly. The number of pages has been close to 80, and in April of 1945 the special Annual Meeting number was 98 pages. Scientific articles have maintained a high excellence and readability that has warranted many of them being abstracted or reprinted in part in other medical and professional publications.

The editorials, the official voice of the Society in many ways, have been forceful, lively, and effective. They have been widely reprinted in many instances in national and sectional publications. The official transactions of the

Society, as well as complete reports of the activities of the District societies, have been regularly published. In addition many articles and reports of vital interest in the field of medical economics have been presented.

Feature sections that have proved interesting to all have been those on industrial health, doctors at war, and the new section titled "Through the Microscope" in which pertinent notes of interest regarding state, sectional and national matters are briefly presented. The reports on members serving with the armed forces has been a fine contribution of reporting on the work of these men, of interest to us at home as well as to the doctors on the fighting fronts everywhere. In that connection it is well to note that the JOURNAL has gone forth every month to the doctors in the armed services wherever they are stationed in the world, and notices of transfers of assignments, and promotions, have been carefully listed each month.

In management the JOURNAL has made several notable contributions. The JOURNAL became the first state medical publication to allow an advertising agency commission for displays contracted with us, and this action has resulted in the adoption of the same procedure by all the other state medical journals. Last summer the managing editor personally visited major advertising agencies in New York city to discuss advertising problems, and subsequently he prepared and distributed to state journal editors a report on advertising problems confronting medical journals which won most favorable comment.

A brochure was prepared to show that Providence, and Rhode Island, represented one of the best test markets in the country, and the excellence of this report was hailed by outstanding national advertising men as one of the finest ever to be presented by a medical journal. This contribution has undoubtedly been of great value in securing advertising for our publication.

Although more advertising has accrued to the JOURNAL as the result of its progressive advancement, yet the cost of printing and distribution has gone correspondingly higher. The Committee has sought to make the JOURNAL outstanding as the official publication of the Society, and therefore has spared no expense in maintaining high standards in printing, and has not sought to make it merely a source of revenue. Photographs and line plates have been used liberally. Color has been utilized to enhance displays. The number of pages has been steadily increased. The JOURNAL is self-supporting and will complete its year with a financial balance.

HAROLD G. CALDER, M.D., *Chairman*, AUGUSTINE W. EDDY, M.D., PAUL APPLETON, M.D., ELIHU S. WING, M.D., WILLIAM P. BUFFUM, M.D.

## COMMITTEE ON THE LIBRARY

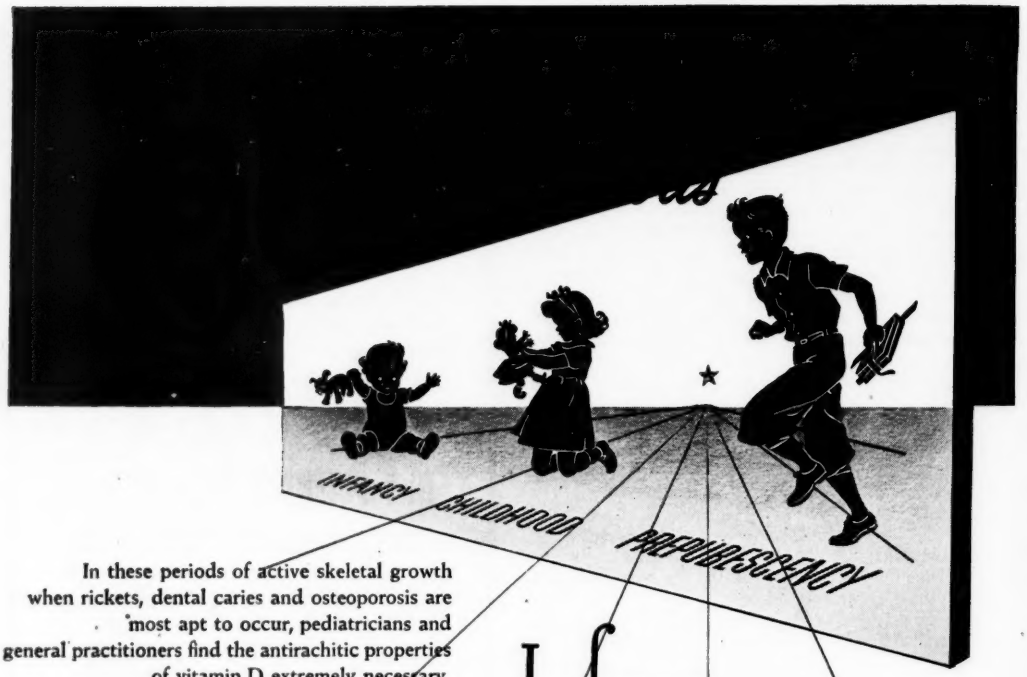
The Library of the Society has been conducted much as in previous years, and the important matters may be summarized in the following figures, which are self explanatory.

Number of visitors, 1102.

This number includes not only Fellows of the Society, but in addition many other individuals who consult the Library for study or research. Moreover, there are constant and daily telephone and written inquiries from the public, all of which are answered by the Library Staff. This feature of the work involves a considerable amount of consultation of periodicals and text books, and is a function of the Library which is not spectacular, and is not therefore generally appreciated by the Fellows. It appears to be increasing in amount, and is evidently important, and indicates that the Library is of great value to the citizens of this and the surrounding communities.

*continued on page* 535

THIS SAFETY DEVICE HAD A SHORT LIFE
... Lightning rod umbrella, early 19th century
But JOHNNIE WALKER is more popular than ever
The enjoyment of Johnnie Walker is one of life's enduring pleasures. Smooth as velvet ... mellow as an old friendship ... each sip of this choice scotch whisky is a memorable occasion.
Popular Johnnie Walker can't be everywhere all the time these days. If occasionally he is "out" when you call...call again.
BORN 1820
still going strong
JOHNNIE WALKER
BLENDED SCOTCH WHISKY
RED LABEL
BLACK LABEL
Both 86.8 Proof
Canada Dry Ginger Ale, Inc.
New York, N. Y.
Sole Importer
BUY UNITED STATES WAR BONDS AND STAMPS




In these periods of active skeletal growth when rickets, dental caries and osteoporosis are most apt to occur, pediatricians and general practitioners find the antirachitic properties of vitamin D extremely necessary.

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## *Pediatric*
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provides a new effectiveness, a great convenience and an appreciable economy in vitamin D administration.

## *Only one capsule is required each month*

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**INFRON PEDIATRIC** is non-toxic and clinically effective, as shown in the published work of Wolf, Rambar, Hardy and Fishbein.

**INFRON PEDIATRIC** is readily miscible with the feeding formula, milk, fruit juices or water—can also be spread on cereal.

Supplied in packages of 6 capsules—sufficient dosage for 6 months.
Available at prescription pharmacies. Ethically Promoted.

*References*

Rambar, A. C., Hardy, L. M. and Fishbein, W. I.: J. Ped. 23:31-38 (July) 1943
Wolf, I. J.: J. Ped., 22:707-718 (June) 1943
Wolf, I. J.: J. Ped., 22:396-417 (April) 1943
Wolf, I. J.: J. Med. Soc. New Jersey, 38:436 (Sept.) 1941

# THROUGH . . . the Microscope

APPARENTLY sidetracked in the attempt to secure passage of one of the health insurance bills tossed into the California legislature earlier this session, Governor Earl C. Warren apparently looked eastward to Rhode Island for help, and as a result came up with a bill for a compulsory hospitalization plan. This bill provides for a compulsory levy of one-half of one per cent of the salary of each employee, with a similar contribution from his employer. . . . Only difference we can see at this distance from the plan advanced by Governor McGrath here a year and a half ago is that the money would be paid to the California Employment Stabilization Commission which acts as the collecting agency, while administration of the provisions of the act would be vested in a Hospital Service Authority to consist of eight members, seven of whom would be appointed by the Governor.

* * *

And just as we were settling down to digest the new Wagner-Murray-Dingwell act (see June issue of R.I.M.J.) in its legislative form, we were interrupted by the proposal of our own Senator Green who has tossed into the Congressional hopper a bill to amend and extend the provisions of the Social Security Act . . . Senator Green reports that "my bill represents what I consider a feasible plan for immediate action without prejudicing other, larger issues, which are involved in the Wagner bill. My bill deals only with those provisions of the Social Security Act which are administered by the Social Security Board . . .". Summarizing his proposal Senator Green reports "it would provide that the Federal Government match all State payments for needy persons, and would give additional funds to poorer states. It would provide disability benefits and hospital benefits in addition to old-age and survivors benefits, and extend the coverage of this system to practically all gainfully employed persons . . ."

* * *

Hope is still held that some committee action will be taken on the Hill-Burton hospital construction bill now resting with the Senate Committee on Education and Labor. Lengthy discussions in open hearings have been held on the act which would amend the Public Health Service Act to authorize grants to the States for surveying their hospitals and public health centers and for planning construction of additional facilities, and would also authorize grants to assist in such construction. . . . Meanwhile the voluntary programs continue to expand, with a recent survey of 62 Blue Cross plans showing large numbers of industrial, business and service firms continuing to pay the costs of Blue Cross services for their employees.

* * *

You may be paged by radio while driving in your automobile, according to one New York physicians telephone service which recently advertised its work in promoting such service. According to the report, the Federal Communications Commission, in its recent suggested allocation of high frequencies for various services, proposed mobile two-way telephone service and one way radio paging. Thus the doctor could be signalled by radio on his own call number and he would then call the telephone exchange for information.

* * *

Probably one of the real outstanding jobs performed by the U. S. Employment Service has been that of selective placement of the handicapped at work so that there can truly be said to be no such term as "unemployable" today. The technique employed is to match handicapped persons with jobs in which their occupational limitations will not affect their ability to work. Utilization of this program should go far towards aiding returning disabled veterans to take their places in useful employment.

* * *

The medical profession will be counted upon to assuage the fears of the public generally regarding malaria. This fact is deduced from the recent appeal of Major General Norman T. Kirk, Surgeon

*continued on next page*

## THROUGH THE MICROSCOPE

*continued from preceding page*

General of the Army, who asks for a better understanding of the problem so that the public will realize that, with a few simple precautions, malaria is not a disease that should give undue concern either to the infected service men or to their families, provided the malaria sufferer is taking treatment or promptly obtains medical care when symptoms occur.

* * *

With both Senator Wagner and Senator Green advocating changes in the unemployment insurance program in their bills now before Congress, it is interesting to note that at least twenty-one of the States—an increase from nine of a year ago—have revised their unemployment compensation laws to increase weekly benefits and lengthen their duration. In addition, a dozen states set up second injury funds, similar to that established in Rhode Island two years ago, thus making employment more favorable for disabled war veterans. From this it would appear that, properly alerted to the needs of their individual residents, the various States may well work out their problems without Federal control.

* * *

The California Medical Association recently fixed its membership dues for 1946 at $100 per member. Reasons for the increase to this amount were loss of revenue due to the fact that 2,200 members are in the armed services, the need for funds to aid doctors returning from the war, the need for adequate funds for post graduate studies and refresher courses for doctors whose practices have been restricted, the need for additional finances to promote more widespread participation in voluntary medical and hospital prepayment plans, and the necessity of re-establishing the reserves of the Association which are being constantly diminished by costly national and state public relations activities and increased cost of operation of all Association functions. With the new assessment the annual gross income from the membership should approximate half a million dollars annually.

**E. P. ANTHONY, INC.**

*Druggists*

178 ANGELL STREET
PROVIDENCE, R. I.

The Makers of *Auralgan* Present

**A NEW SULFA DRUG**

*Otosmosan*

**IN SUPPURATING EAR CONDITIONS**

***Not merely a mixture but a potent Chemical Combination.***

**Sulfathiazole-Carbamide in specially dehydrated glycerol "Doho."**

**Contains the equivalent of about 10% sulfathiazole.**

- **EXERTS A POWERFUL SOLVENT ACTION ON PROTEIN MATTER**
- **CLEANSES AND DEODORIZES THE SITE OF INFECTION**
- **WILL NOT RETARD THE NORMAL GRANULATION OF TISSUE**
- **BACTERIOSTATIC — ANALGESIC — DEHYDRATING**

*Physician's Sample Sent on Request*

New York 13, N. Y. **THE DOHO CHEMICAL CORPORATION** Montreal

## ANNUAL REPORTS

*continued from page 529*

Circulation: 316 Journals, 130 books.

Books received, by purchase: from the Rhode Island Medical Journal, sent by the publishers for review, and by gift, a total of 305.

Number of books in the Library, 33,807. This does not include pamphlets, of which there are many.

Number of books catalogued to date, 22,362.

Journals bound, 87 volumes.

Inter-library loan requests, 10.

The following gifts have been received and are gratefully acknowledged: Books from Drs. P. P. Chase, W. H. Buffum, H. DeWolf, L. C. Kingman, also Miss Hope Vinton and Mrs. P. H. Rushton.

In addition, many pamphlets from various sources.

The Library receives regularly, by subscription and exchange, 148 Journals.

HERBERT G. PARTRIDGE, M.D., *Chairman*, ADOLPH W. ECKSTEIN, M.D., LOUIS E. BURNS, M.D.

## COMMITTEE ON INDUSTRIAL HEALTH

The Committee on Industrial Health during the past year has been active in promoting postgraduate education for industrial physicians. Members of the Committee met with Dr. Charles McDonald, head of the Department of Medical Sciences at Brown University and, thru his good offices, arranged a postgraduate course in cooperation with the Industrial Physicians Society and the Industrial Nurses Club.

The course has been opened to doctors, nurses, industrialists and all interested persons as a regular postgraduate Extension Course of the University. Enrollment has reached the total of eighty-five persons and the classes have been well attended throughout the entire course. A list of the speakers and their subjects is appended. It will be noted that they are men of prominence in Industrial Medicine and occupy the most important positions throughout the East and Middle West in the Industrial Health field.

The attitude of the University has been extremely helpful. Dean Arnold inaugurated the course; Dr. McDonald has been in constant attendance and supervised every phase of the proceedings; and we have been honored with visits from the Vice President of the University on three occasions.

The course consisted of introductory remarks by Dr. James Deery, head of the Department of Industrial Hygiene, State Department of Health, and on these occasions Dr. Deery has demonstrated the various pieces of apparatus available for use by industry in his Department. Several of our lectures have been illustrated with lantern slides and there has been a fair amount of discussion following the lecture.

Your Committee is indeed gratified by the response to this course. It is the first time in the history of the University that post-graduate work in Medicine has been given and it is the first attempt on our part to inaugurate postgraduate work along this particular line using University facilities.

It is definitely recommended that this course be used as a basis for further and more intensive post-graduate training. The Committee feels that it should be a regular part of Brown University Extension series and should prove more popular through the years. Plans should get under way at least six months before the course is inaugurated and a definite well-planned curriculum should be worked out in cooperation with recognized authorities.

*continued on page 539*

COUNCIL ACCEPTED

Theocalcin

*for the failing heart*

A Wise Choice of Diuretic
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Myocardial Stimulant

TIME PROVED - EFFECTIVE ORALLY
EASILY TOLERATED

To reduce edema and diminish dyspnea and to improve heart action prescribe 1 to 3 Theocalcin Tablets (7½ gr. each) t. i. d.

Theocalcin (theobromine-calcium salicylate), Trade Mark, Bilhuber.

BILHUBER-KNOLL CORP. ORANGE NEW JERSEY

Grown in the nation's most fertile garden spots, the fruits and vegetables raised for Heinz Baby Foods are superior in flavor, color and nutritive value. This is just one reason why doctors everywhere confidently recommend these foods for the infants and toddlers in their care.

# HEINZ *Baby Foods*

**Heinz Strained Foods and Junior Foods are now packed in glass containers**

## ANNUAL REPORTS

*continued from page 535*

We are sure that as a result of our experience men who are prominent in the field of Industrial Health throughout the country will be glad to participate and to give us the benefit of their experience in providing post-graduate instruction in Industrial Health.

The course this year was essentially basic in character, broad in its scope, and general in nature so as to introduce the subject to as many people as possible and to stress mostly basic principles. In future years it would be desirable to have a curriculum based on a specific phase of Industrial Health and have each lecture integrated properly with the preceding and the following one. This we feel sure can be done and we do so recommend.

CHARLES L. FARRELL, M.D., *Chairman*, STANLEY DAVIES, M.D., ARTHUR E. MARTIN, M.D., ELIHU S. WING, M.D., WILLIAM P. BUFFUM, M.D.

## COMMITTEE ON EDUCATION

Herewith is submitted the report of the Committee on Education of the Rhode Island Medical Society for the year commencing June 1, 1944.

The fifteen-minute weekly radio talks which have now been running continuously since December 1938 are still going on the air every Saturday afternoon at 2 P. M. Since the last report eight hundred and seventy-one letters have come to the society regarding these talks. The previous year the number was seven hundred and fifty-five so it can be readily seen that our radio audience is definitely appreciative and increasingly so. Altogether since the beginning of the series we have received six thousand, one hundred and eighty-nine letters regarding these broadcasts, and all of these letters are accompanied by six cents in stamps with a request for a copy of some of these talks.

In addition to the regular society broadcasts above described, the Rhode Island Medical Society has also, since the twenty-fourth of September, cooperated with Blanding & Blanding, Inc. of Providence, Rhode Island in supplying speakers for their program which goes on the air every Sunday afternoon at 1:15 P. M. Thirty-five of these broadcasts have been given and thus far two hundred and forty-seven requests for copies of them have been received by Blanding & Blanding and Station WEAN. This program is of the dramatized type and seems to be meeting with public approval and support. Enclosed is a list of the radio talks that have been given in the past year and also a list of the radio talks as given over Station WEAN by Blanding & Blanding.

*257*, May 27—The Value of Social Service in Medicine, Miss Bess H. Medary, Providence, R. I.; *258*, June 3—Penicillin, Dr. Robert Riemer, Pawtucket, R. I.; *259*, June 10—Diseases of the Rectum, Dr. Louis Cerrito, Westerly, R. I.; *260*, June 17—District Nursing in Wartime, Nellie R. Dillon, R. N., Providence, R. I.; *261*, June 24—Head Injuries, Dr. Daniel V. Troppoli, Providence, R. I.; *262*, July 1—Advances in the Treatment of Burns, Dr. Francis E. Hanley, Providence, R. I.; *263*, July 8—Hare-lip and Cleft Palate, Dr. Albert A. Barrows, Providence, R. I.; *264*, July 15—Pernicious Anemia, Dr. Henry J. Gallagher, Providence, R. I.; *265*, July 22—Fractured Hip, Dr. Henry McCusker, Providence, R. I.; *266*, July 29—Administrative Side of a Hospital, Dr. Henry Joyce, Providence, R. I.

*267*, Aug. 5—Your Hair, Dr. F. Ronchese, Providence, R. I.; *268*, Aug. 12—Infantile Paralysis, Dr. Edward J. West, Providence, R. I.; *269*, Aug. 19—Appendicitis, Dr.

*continued on next page*


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## ANNUAL REPORTS

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Arthur Hardy, Providence, R. I.; 270, Aug. 26—Arthritis, Dr. A. Giura, Warren, R. I.; 271, Sept. 9—Athlete's Foot, Dr. William B. Cohen, Providence, R. I.; 272, Sept. 16—Modern Anesthesia, Dr. Samuel Nathans, M.D., Hope Valley, R. I.; 273, Sept. 23—The Role of the Teeth in Health and Disease, Dr. Albert L. Midgley, Providence, R. I.; 274, Sept. 30—Gout, Dr. A. Henry Fox, Riverside, R. I.; 275, Oct. 7—One-third of a State, Mr. Stanley H. Saunders, Providence, R. I.; 276, Oct. 14—Your Children's Teeth, Dr. Raymond L. Webster, Providence, R. I.; 277, Oct. 21—High Blood Pressure, Dr. John F. Kenney, Pawtucket, R. I.; 278, Oct. 28—Colitis, Dr. Frank A. Cummings, Providence, R. I.

279, Nov. 4—Common Diseases of the Eye, Dr. Linley C. Happ, Providence, R. I.; 280, Nov. 11—Hardening of the Arteries, Dr. Harrison F. Hyer, Providence, R. I.; 281, Nov. 18—Gall Bladder in Health and Disease, Dr. Robert H. Whitmarsh, Providence, R. I.; 282, Nov. 25—Psoriasis, Dr. Carl D. Sawyer, Providence, R. I.; 283, Dec. 9—Brain Tumors, Dr. Ernest A. Burrows, Providence, R. I.; 284, Dec. 16—Tonsils and Adenoids, Dr. Adrien G. Tretreault, Pawtucket, R. I.; 285, Dec. 23—Stomach Cancer, Dr. Edward S. Cameron, Providence, R. I.; 286, Dec. 30—Obstetrics in Rhode Island, Dr. Bertram H. Buxton, Providence, R. I.

287, Jan 13—Hemorrhoids, Dr. Louis C. Cerrito, Westerly, R. I.; 288, Jan. 27—The Magic of Bronchoscopy, Dr. Gordon J. McCurdy, Providence, R. I.; 289, Feb. 3—Venereal Disease Control in Rhode Island, Dr. Hilary J. Connor, Providence, R. I.; 290, Feb. 10—Angina Pectoris, Dr. Clifton B. Leech, Providence, R. I.; 291, Feb. 17—Tuberculosis in Rhode Island, Dr. U. E. Zambarano, Wallum Lake, R. I.; 292, Feb. 24—Meningitis, Dr. Edward J. West, Providence, R. I.

293, March 3—Varicose Veins, Dr. Jesse P. Eddy, III, Providence, R. I.; 294, March 10—Surgery in Cancer, Dr. John E. Ruisi, Westerly, R. I.; 295, March 17—Hay Fever, Dr. Francis B. Sargent, Providence, R. I.; 296, March 24—Your Appendix, Dr. E. Victor Conrad, Providence, R. I.; 297, March 31—Breast Cancer, Dr. Daniel V. Troppoli, Providence, R. I.; 298, April 7—Modern Burn Therapy, Dr. Arthur E. Hardy, Providence, R. I.; 299, April 21—Value of Red Cross Volunteers in the Community, Dr. Harmon P. Jordan, Providence, R. I.; 300, April 28—Present Day Anesthesia, Dr. Howard W. Umstead, Pawtucket, R. I.

301, May 5—Deafness, Dr. Lewis B. Porter, Providence, R. I.; 302, May 12—Industrial Health in Rhode Island, Dr. James P. Deery, Providence, R. I.; 303, May 19—Thyroid Disease, Dr. Louis I. Kramer, Providence, R. I.; 304, May 26—X-ray Diagnosis, Dr. Eugene Field, Providence, R. I.

The following is the list of the talks given over Station WEAN:

1, Sept. 24—Appendectomy (Lightning), Name not announced; 2, Oct. 1—Weight Control (Jack Spratt), Dr. John F. Kenney, Pawtucket, R. I.; 3, Oct. 8—Pediatrics (The Bent Twig), Dr. John Langdon, Providence, R. I.; 4, Oct. 15—Heart Disease (Public Enemy No. 1), Dr. Henry Weyler, Providence, R. I.; 5, Oct. 22—Skin Care (Skin Deep), Dr. Carl Sawyer, Jr., Providence, R. I.; 6, Oct. 29—Headache (The Hammer), Dr. Joseph M. Belliotti, Providence, R. I.

7, Nov. 5—Transfusion (Lend-Lease), Dr. B. Earl Clarke, Providence, R. I.; 8, Nov. 12—Common Cold (Drop the Handkerchief), Dr. Francis B. Sargent, Providence, R. I.; 9, Nov. 19—Relaxation and Sleep (Easy Does It), Dr. Elihu S. Wing, Providence, R. I.; 10, Dec. 5—Allergy (Doctor Sherlock), Dr. William P. Buffum,

*continued on page 542*

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## ANNUAL REPORTS

*continued from page 540*

Providence, R. I.; 11, Dec. 10—Epilepsy (The Hawk), Dr. Laurence A. Senseman, Pawtucket, R. I.; 12, Dec. 17—Burns (Trial by Fire), Dr. Francis Garside, Providence, R. I.; 13, Dec. 24—Stomach Surgery (Blockade), Dr. Anthony V. Migliaccio, Providence, R. I.; 14, Dec. 31—Tuberculosis (White Shadow), Dr. Ubaldo E. Zambarano, Wallum Lake, R. I.

15, Jan. 7—Alcoholism (No Hiding Place Down There), Dr. John Regan, Providence, R. I.; 16, Jan. 14—Winter Care of Children (Sabotage), Dr. Harold G. Calder, Providence, R. I.; 17, Jan. 21—Low Back Pain (Old Man of the Sea), Dr. Herbert Harris, Providence, R. I.; 18, Jan. 28—Polio (Brother, You Can Spare a Dime), Dr. Kalei K. Gregory, Providence, R. I.; 19, Feb. 4—Adolescence (Growing Pains), Dr. Katharine K. Cutts, Providence, R. I.; 20, Feb. 11—Hair (Farewell to All That), Dr. Malcolm Winkler, Providence, R. I.; 21, Feb. 18—Tonsils and Adenoids (T & A), Dr. Lindley C. Happ, Providence, R. I.; 22, Feb. 25—Pneumonia (The Strangler), Dr. Alex M. Burgess, Providence, R. I.

23, March 4—Hernia (A Stitch in Time), Dr. Anthony Corvese, Providence, R. I.; 24, March 11—Diabetes (The Balance), Dr. Paul C. Cook, Providence, R. I.; 25, March 18—Penicillin (X Marks the Spot), Dr. Henry S. Joyce, Providence, R. I.; 26, March 25— Anesthesia (The Quality of Mercy), Dr. Priscilla Sellman, Providence, R. I.; 27, April 1—Sympathectomy (The Safety Valve), Dr. Jesse P. Eddy, III, Providence, R. I.; 28, April 8—Inoculation (The Watch Dog), Dr. William P. Shields, Providence, R. I.; 29, April 15—Home Nursing (Self Defense), Dr. Wilfred Pickles, Providence, R. I.; 30, April 22—Cancer (The Three Sisters), Dr. George W. Waterman, Providence, R. I.; 31, April 29—Nervous Indigestion (The Vulture), Dr. Walter C. Weigner, Providence, R. I.; 32, May 6—Dentistry (Tomorrow is Too Late), Dr. Charles F. McKivergan, Providence, R. I.

As previously mentioned eight hundred and seventy-one letters have been received by your committee from the general public requesting copies of the above talks, and this same number have been mimeographed and mailed to the radio audience. There are six who call for a copy of each lecture. This regular mailing list includes Miss MacDonald at the Public Health Library, Miss Carberry of the Rhode Island State Department of Social Welfare, Mr. Dunham from the Red Cross, Mr. James E. Smith of the United States Fidelity and Guaranty Company and Mr. John Farrell, Executive Secretary of the Providence District Society. Many of the letters received contain not only requests but expressions of appreciation.

It is the belief of your committee that these radio talks should again be continued as in the past. We wish to express our thanks to Miss Dickerman and her associates and to Mr. John Farrell, Executive Secretary of the Providence District Society, for the work and assistance which they have rendered to the committee. We wish also to express our thanks to Station WPRO for its courtesy in giving us time, to Blanding & Blanding, Inc. for the advertising which has been freely contributed, and to the many members of the profession who have by their cooperation and suggestions been of invaluable aid.

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| Active Tuberculosis | 30 | 10 | 11 | 51 | 54 | 1 Year |
| Chronic Nephritis | 41 | 17 | 0 | 58 | 0 | 1 Year |
| Chronic Suppurative Diseases; Burns (†) | 18 | 10 | 11 | 39 | 0 | 70 Days |
| Gastro-Intestinal Lesions | 18 | 10 | 11 | 39 | 0 | 70 Days |
| Pregnancy and Lactation | 0 | 0 | 11 | 11 | 0 | Term of Pregnancy and Lact. |

(**) These figures are granted in addition to the regular consumer ration book allowance.
( †) This group includes empyema, osteomyelitis, extensive supperative lesions of soft parts, subcutaneous tissues or muscle and those infections in which there is profuse pus formation.

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
*Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60*

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JOSEPH L. BELLIOTTI, M.D. WILLIAM P. BUFFUM, M.D.

THE Rhode Island General Assembly adjourned its 1945 session on April 21. In a final round-the-clock session day bills that had piled in committees throughout the previous three months were brought forward for Assembly action. Several health bills to which the Committee on Public Laws had expressed opposition, and upon which a hearing had been sought, were included in the measures brought out with recommendation of passage, and in several instances these measures were passed by the House.

Highlights of the session as regards health legislation may be summarized as follows:

*LICENSURE IN THE HEALING ART:*

Passed in concurrence was a measure (H-976) providing that appeals from rulings of the division of examiners in medicine in the state health department shall be heard first in the Superior Court instead of the Supreme Court.

Passed by the House, but left in Senate committee files, was an act (H-800-A) providing for a new definition of the practice of chiropractic to include physical medicine, eliminating the examination for physio-therapy examination and certification, and prohibiting the professional examining board from asking any questions in its examination on subjects within the scope of the tests given by the Basic Science Board.

Passed by the House in the all night session of the final day, but left in Senate files, was an act (H-733) providing for the licensure of naturopaths by their own examining board, defining the practice in liberal manner, and excusing all applicants from basic science examinations.

Passed by the House, and left in Senate files upon adjournment, was an act (H-880) which would authorize that podiatrists should be permitted to examine the legs and pedal extremities of school children for the purpose of guarding against any further outbreaks of infantile paralysis.

Passed in concurrence was a measure (H-740) empowering the board of examiners in chiropody, after public hearing, to establish by order minimum rates for professional services, the order to be issued when 60% of the licensed chiropodists file an agreement with the board.

*HOSPITAL AND MEDICAL SERVICE CORPORATIONS:*

Passed in concurrence were three acts affecting hospital and medical service corporations in the State. One act (H-836, published in its entirety in the April issue of the JOURNAL) provides for the incorporation of non-profit medical service corporations and defines their powers. The other acts (H-838) and (S-145) permit State payroll deductions for Blue Cross or medical service corporations, and allow an increase from one and a half million dollars to two and a half million as the amount of property the Blue Cross corporation is authorized to hold.

*HOSPITALS:*

Passed in concurrence was an act (S-194) providing that during any year in which the General Assembly appropriates $15,000 for the Newport Hospital, the hospital shall admit any person with a contagious disease from any town in Newport County on the same basis that it admits residents of Newport, and shall make no charge to any such town or the city of Newport for contagious cases so admitted.

Passed in concurrence was an act (H-713) providing for a survey of hospital facilities, and for the right of the health department to accept Federal funds for the purpose of carrying out the survey.

*MEDICAL CARE PLANS:*

Passed in concurrence was an act (S-193-A) to which the Committee on Public Laws made objection, prohibiting discrimination by any State department against osteopathic physicians or optometrists in any medical plan which involves the expenditure of State funds. (NOTE: This act specifically states *medical care*, a phase of healing outside the scope of osteopathy or optometry). Signed by the Governor.

*HEALTH LAWS:*

Passed in concurrence was a resolution (H-862) continuing the special Rhode Island Public Health Laws Survey Commission for another year.

*CASH SICKNESS COMPENSATION:*

Passed in concurrence was an act (H-585), reportedly amended by the Senate, setting up a five-

*continued on page 550*

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**COMMITTEE ON PUBLIC LAWS**

*continued from page 547*

member directorate to administer the Rhode Island cash sickness compensation fund, and to have the power to make, adopt, and enforce all reasonable rules, regulations and orders with respect to its investment, reinvestment and use. (Not signed by the Governor.)

Passed by the House, but left in Senate files, was a measure (H-942) requiring employers to pay the same amount into the cash sickness fund as is now paid by employees.

Passed by the Senate on a division vote of 28 to 10, but left in House files, was the act (S-29) amending the cash sickness law so that a worker receiving workmen's compensation or Federal old-age assistance would not be entitled to cash sickness benefits unless sums obtained under the former programs are less than he would receive from cash sickness, and if so the difference would be made up from the cash sickness fund.

*INDUSTRIAL HEALTH:*

Passed by the House, but not by the Senate, was a bill (H-689) creating an industrial board in the department of labor to draft health codes for industries with approval of the director; also would compel employers to report and keep records for one year of all accidents causing loss of work beyond the day of accident, and medical attention in addition to first aid.

Passed in concurrence was the act (H-690-B) creating a 5-member commission to study and draft health and safety codes for places of employment and to submit to the next session of the general assembly suitable legislation for making safety and health codes effective.

Also passed in concurrence was an act (S-90) specifically giving the division of women and children enforcement of the law requiring a 20-minute lunch period for women and children in industry.

*SAFETY:*

Mindful undoubtedly of the Hartford circus disaster, the Assembly passed in concurrence an act (H-654) providing for licensing by municipal authorities of all tents exceeding 120 square feet in area, specifying fire protection on requirements, seating arrangements, and locations of entrances and exits, prohibiting smoking in tents used for assembly and providing for inspection and supervision by firemen.

*PHYSICALLY HANDICAPPED:*

A bill (S-229) increasing from 5 to 11 the membership of a commission to study the needs of the physically and mentally handicapped who cannot be cared for under present State and Federal vocational rehabilitation programs was passed by the Senate, but left in House files.

*WORKMEN'S COMPENSATION:*

Two acts of a health nature affecting the workmen's compensation law were passed by the House, but not by the Senate. One (H-700) would increase the maximum weekly compensation for total disability from $20 to $25 a week, and the other (H-858) would increase from 120 to 200 weeks the period during which workers suffering entire and irrecoverable loss of sight of either eye, or severe reduction of vision, shall receive compensation of $8 to $20 a week.

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**Capt. Edmund J. Sydlowski, MC, 0-345997, Regional Hospital, Camp Maxey, Texas**

**Capt. Nathan Chasset, MC, 0-1696224, Station Hospital, Indiantown Gap, Pennsylvania**

**Capt. Edward G. Damarjian, MC, Valley Forge General Hospital, Phoenixville, Pennsylvania**

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# Penicillin DOSAGE TABLE*

| INDICATIONS | INITIAL DOSE (UNITS) | CONTINUING DOSAGE (UNITS) | UNITS IN 24 HR. | REMARKS |
|---|---|---|---|---|
| ***Serious Infections*** (staphylococcus, clostridium, hemolytic streptococcus, anaerobic streptococcus, pneumococcus, gonococcus, anthrax, meningococcus) Adults and children | 15,000 to 20,000 | (a) Intravenous drip: 2000 to 5000 every hr. | 40,000 to 120,000 or more | (a) Dissolve ½ of 24 hr. dose in 1 liter (1000 cc.) normal saline; let drip at 30 to 40 drops per minute. |
| | | or (b) Intramuscularly: 10,000 to 20,000 every 3 or 4 hr. | 40,000 to 120,000 or more | (b) Concentration: 5000 U. per cc. normal saline. |
| | | or (c) Intramuscular drip | 40,000 to 120,000 or more | (c) Total daily dose in 250 cc. normal saline. |
| Infants | 5000 to 10,000 | 3000 to 10,000 intramuscularly every 3 hr. | 20,000 to 40,000 or more | Each dose in 1 or 2 cc. of normal saline. |
| ***Chronically infected*** compound injuries, osteomyelitis, etc. Adults and children | 5000 to 10,000 | 10,000 every 2 hr. or 20,000 every 4 hr. intramuscularly or intravenously. Larger doses may be necessary at times. | 40,000 to 120,000 or more | Concentration for intramuscular inj.: 5000 U. per cc. normal saline. For intravenous inj.: 1000 to 5000 U. per cc. Supplement with local treatment. |
| ***Gonorrhea*** | 20,000 every 3 hr. intramuscularly for 5 doses | | 100,000 | Results of treatment should be controlled by culture of exudate. |
| ***Empyema*** Adults and children | 30,000 to 40,000 once or twice daily into empyema cavity | | 30,000 to 80,000 | Dissolve in 20 to 40 cc. normal saline and inject into empyema cavity after aspiration of pus. |
| ***Meningitis*** Adults and children | 10,000 once or twice daily into subarachnoid space or intracisternally | | 10,000 to 20,000 | Concentration: 1000 U. per cc. normal saline. |
| ***Bacterial Endocarditis*** Adults and children | 25,000 to 40,000 | 25,000 to 40,000 every 3 hr. intramuscularly | 200,000 to 300,000 | Continuous treatment for 3 weeks or longer. In a few cases the intravenous drip is more advantageous. |

*Based upon recommendations by Chester S. Keefer, *War Production Board Penicillin Leaflet*, Apr. 1, 1945; and by Wallace E. Herrell and Roger L. J. Kennedy, *Journal of Pediatrics*, 25:505, Dec., 1944.

*Write for pocket size copies of this Dosage Table*

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